

THE

HISTORY OF THE NAVY

DURING THE REBELLION.

BY

CHARLES B. BOYNTON, D.D.,

CHAPLAIN OF THE UNITED STATES HOUSE OF REPRESENTATIVES, AND
ASSISTANT PROFESSOR AT THE U. S. NAVAL ACADEMY.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS.

~~VOL. I.~~

~~NEW YORK.~~

D. APPLETON AND COMPANY,

443 & 445 BROADWAY.

LONDON: SAMPSON LOW, SON, & MARSTON, MILTON HOUSE, LUDGATE HILL

1867.

TO THE PUBLIC.

THOSE who are asked to read a history have a right to inquire by what authority its statements are made, and what claims the work has to authenticity and accuracy.

To such questions the author of this history replies, that the whole material for the work has been drawn from documents in possession of the Navy Department, so that its narrative rests upon the highest possible authority.

The author feels that he can in no manner adequately repay the kindness with which the honorable Secretary of the Navy, the Assistant Secretary, and other officers of the Department, placed at his disposal whatever could elucidate the part which the Navy bore in our great national struggle; and equal thanks are due from him to the chief officers of the Navy for the aid they have cheerfully rendered, enabling him to impart a freshness and life to the work which, without their assistance, would have been impossible.

Through the kindness of the Secretary of the Navy he has had free access to the navy-yards and ships, and to the Ordnance Department, and nothing has been withheld that could properly be granted; while the connection of the writer with the Naval Academy, and his residence in Washington, have given him

facilities for collecting the materials for such a history that leave little or nothing to desire. This material has been wrought into its present shape in the earnest hope that it may aid in setting the work of the Navy in its true light before the public, so as to convince the people how much the country is indebted for its triumph and present security to those who organized and directed its operations, and to those who so successfully guarded our long coast-line and the communications of the Army, and who fought our battles on the rivers and on the sea.

WASHINGTON, *October*, 1866.

P R E F A C E .

THE campaigns and battles of the Revolution did not gain for the Americans a very brilliant military reputation; not because of any lack of courage or skill in our soldiers, but because they were regarded merely as giving evidence of personal bravery on the part of undisciplined militia, and not as indicating any remarkable genius for the art of war.

Nor did any one then fear that the young Republic would soon become a nation, capable of organizing war on a scale so vast as to alarm all Western Europe, a military power second to none in the world. Europe, and especially England, was first startled by the operations of our Navy in our second war. The ease with which some of their finest frigates and sloops were sunk or captured by American vessels of the same rate, filled England with amazement and alarm. The character of our ships, the manner in which they were manœuvred, the havoc wrought by our guns, were all without precedent in naval war; and England and France saw in these victories the first foreshadowings of a great naval power, which in a not remote future might dispute with either or both, the supremacy of the seas, and perhaps exclude them from the Western Continent.

From that time the naval and commercial power of the United States has attracted the attention of Europe more than

any other feature of our growth, because they knew that however large our fighting force on land might be, we should be unable to check them in any designs upon this continent unless our naval strength should become equal to their own.

With England and France, therefore, the most interesting question connected with our affairs has been, whether we could create a truly formidable Navy. Our naval strength was the standard by which they measured their power to attack, and ours to defend. They did not believe it possible for us to produce a Navy in a few months which could both seal up our long line of sea-coast and defy their own most formidable ships, and this mistaken judgment was the main influence in deciding their policy in regard to American affairs. A history of the Navy, then, is a history of that power by which Europe gauges our national importance, and by which our rank among nations is assigned: because, until a true Christian civilization prevails, the nobler attributes of a nation will be overlooked in view of its ability to carry on a great war; and because, if the United States should ever wage a great European war, the battles would be mainly upon the seas.

While our Army has done a work beyond all praise, and has settled the question of our ability to defend our territory against any force which could be brought here, the Navy has saved us from foreign intervention that could not have been otherwise avoided, while at the same time its labors in putting down the rebellion have been far greater than has been generally supposed.

The glorious achievements of the Army have been set forth by so many skilful writers, that they have become familiar, as they should be, even to children. This is well. Let our soldiers and their deeds be held in grateful remembrance while we remain a nation. Their steadfast loyalty, their long-enduring courage, their wonderful skill in all the arts of war, and the facility with which a veteran and victorious army dissolved

itself and joined the mass of society in the peaceful works of life, these are not likely to be overstated by the historian, or overestimated by the people.

The calling into existence and maintaining in efficient condition a blockading fleet of six hundred vessels has been pronounced in Europe the great fact of the war, and this will be the judgment of impartial history. And yet the energy, the promptitude, the successful boldness, the comprehensive planning, the skill in the choice of means evinced by the Navy Department during the whole war, have made but slight impression upon the popular mind, because the people are in a great degree ignorant of the facts, and the officers and sailors of our six hundred ships so constantly and successfully employed, have occupied but a small space in the public thought; because so little is known, except of the main incidents of some of the more important battles.

By the pencil, the photograph, by letters from thousands of soldiers to friends at home, by eloquent speakers, by countless pens of "ready writers," every movement of our armies has been made to pass as distinctly before the minds of millions as if seen by the bodily eye. The people have been made to feel almost as deep an interest in the scenes of the camp, the march, the bivouac, the picket and skirmish line, the battle-field, and hospital, as if they had been actual spectators of all. But with the Navy it has been widely different. Few, comparatively, have seen, and fewer still have attempted to describe the scenes on board our ships—the perils, the daring, the skill of our seamen, whether in the exciting chase or in those battles that have astonished Europe. The results of our great victories have been given, but very few among us have any clear conception of the scenes on board a ship, whether engaged in the usual duties of the blockading squadron, or in the chase of a blockade-runner, or during the progress of a fight.

The object of this history, therefore, is not only to prepare

a truthful record of some of the most important and least known events of the war, but to present the work of the creation of the Navy and its subsequent operations so clearly before the public mind, that the people shall become familiar with them as they now are with scenes in the Army; and if this can be successfully done, the writer believes that they will feel again that enthusiasm for the Navy which thrilled all hearts when Preble, and Hull, and Bainbridge, and Porter, and Stewart, and Decatur, and Perry, and McDonough, won for themselves and their country an undying renown.

Another topic demands a brief notice here. The political agitations which moved the country so profoundly soon after the close of the war, have made it difficult for a great majority of the American people to judge impartially any man, however great his services were during the war, who afterward approved of the policy of President Johnson. Although the history of the course of the Navy Department, and the operations of the Navy during the rebellion, does not reach the political struggle that succeeded the war, still the history of the actors in it will be viewed now through the heated and distorting medium of party politics, and some will perhaps deem the praise bestowed in this volume upon the management of the Navy Department to be somewhat too decided and warm. Whatever encomium is here found is, in the judgment of the author, demanded by the undoubted facts in the case, and is abundantly supported by official documents.

Future historians will assign to the politicians of the day their proper positions. The object of this work is to present the history of the Navy during the war, and to award praise or censure to the actors in those scenes, without reference to their subsequent political course. Only thus can impartial justice be done, thus only can a reliable history of that period be written.

During the continuance of the great struggle, the Navy De-

partment was in perfect sympathy with the Union party of the country, and it is this period only which the present volume covers. It is a part of the history of the war, and not of the political conflicts that followed.

No candid history, based on official statements, will deny that the Department was conducted during the war with eminent ability, energy, and success, with an integrity not to be questioned, and that it was ever ready to assert the dignity of the country and maintain her honor.

CONTENTS.

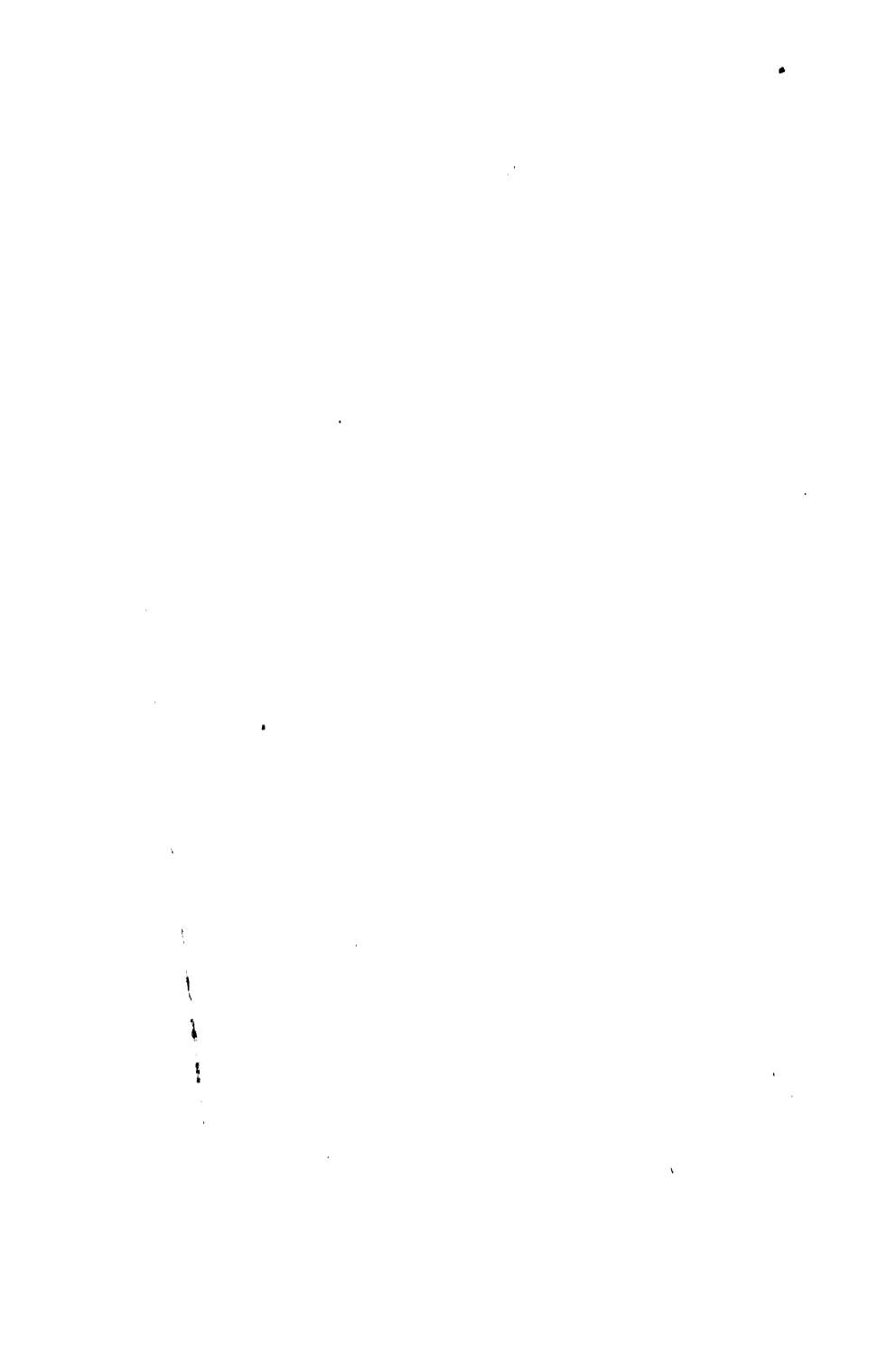
	PAGE
CHAP. I.—INTRODUCTORY, ...	18
II.—ORGANIZATION OF THE NAVY DEPARTMENT, ...	19
III.—THE OFFICE OF THE ASSISTANT SECRETARY.—THE MENTAL FORCE STORED WITH THE PEOPLE, AND EVER READY FOR USE.—THE MIAN- TONOMOH'S VISIT TO EUROPE, ...	56
IV.—FURTHER DETAILS OF THE ORGANIZATION OF THE DEPARTMENT, OFFICE OF CHIEF CLERK, ETC., ...	70
V.—THE CONDITION OF THE COUNTRY, AND THE STATE OF PUBLIC OPINION AT THE TIME OF MR. LINCOLN'S INAUGURATION, ...	75
VI.—THE QUESTION OF THE BLOCKADE, ...	83
VII.—THE WORK REQUIRED OF THE NAVY, ...	89
VIII.—THE MEANS AT THE DISPOSAL OF THE NAVY DEPARTMENT WHEN THE WAR BEGAN, ...	97
IX.—THE FIRST MEASURES ADOPTED FOR THE INCREASE OF THE NAVY, ...	107
X.—THE IDEAS WHICH GOVERNED THE DEPARTMENT IN THE CONSTRUCTION OF NEW VESSELS, ...	117
XI.—THE IRON-CLAD NAVY, ...	141
XII.—THE INVENTOR OF THE MONITOR, ...	169
XIII.—THE MONITORS, ...	172
XIV.—THE DIFFERENT CLASSES OF MONITORS, ...	185
XV.—THE RELIEF OF FORT SUMTER, ...	244
XVI.—AMERICAN ORDNANCE, ...	269
XVII.—THE RELIEF OF FORT PICKENS, ...	296
XVIII.—THE BEGINNING OF THE CONFLICT.—RESCUE OF THE FRIGATE CONSTI- TUTION, ...	305
XIX.—OPERATIONS ON THE POTOMAC, ...	310
XX.—FIRST IMPORTANT NAVAL EXPEDITION.—CAPTURE OF THE HATTERAS FORTS, ...	331
XXI.—THE MONITOR AND THE MERRIMACK, ...	358
XXII.—CAPTURE OF ROANOKE ISLAND.—OPERATIONS IN PAMLICO AND AL- BEMARLE SOUNDS, ...	377

	PAGE
XXIII.—CAPTURE OF NEWBERN AND FORT MACON, ...	391
XXIV.—DESTRUCTION OF THE REBEL FLEET AT ELIZABETH CITY, . . .	405
XXV.—EXPEDITIONS TO HAMILTON, WASHINGTON, AND FRANKLIN, . . .	418
XXVI.—EXPEDITION TO HILTON HEAD, AND CAPTURE OF THE FORTS, . .	428
XXVII.—CAPTURE OF FORT CLINCH, FERNANDINA, AND ST. MARY'S, . .	451
XXVIII.—MOVEMENTS OF THE REBELS.—OPERATIONS ON THE SOUNDS, INLETS, AND RIVERS, ...	464
XXIX.—FALL OF FORT PULASKI, ...	487
XXX.—THE NAVY OF THE WEST AND OUR INLAND WATERS IN ITS RELATIONS TO OUR NAVAL POWER AND THE FUTURE POLICY OF OUR COUNTRY, 491	491
XXXI.—THE MISSISSIPPI SQUADRON, ...	495
XXXII.—BEGINNING OF ACTIVE OPERATIONS ON THE WESTERN RIVERS, . .	508
XXXIII.—CAPTURE OF FORT HENRY.—EXPEDITION UP THE TENNESSEE, . .	515
XXXIV.—CAPTURE OF FORT DONELSON, ...	528
XXXV.—OPERATIONS AGAINST AND CAPTURE OF ISLAND NUMBER TEN, . .	534
XXXVI.—THE BATTLE OF PITTSBURG LANDING.—THE WORK OF THE GUNBOATS IN THAT ACTION, ...	558
XXXVII.—FURTHER OPERATIONS ON THE TENNESSEE.—MOVEMENTS ON THE MIS- SISSIPPI.—ATTACK ON FORT PILLOW.—FIGHT WITH THE GUNBOATS, 566	566
XXXVIII.—BATTLE WITH THE REBEL FLEET AT MEMPHIS, AND CAPTURE OF THE CITY, ...	574

ILLUSTRATIONS.



GIDEON WELLES, SECRETARY OF THE NAVY.....	FRONTISPIECE.
G. V. FOX, ASSISTANT SECRETARY.....	PAGE 58
WM. FAXON, ASSISTANT SECRETARY.....	70
"RESACA".....	121
"IROQUOIS" AND "KEARSARGE" CLASS.....	129
THE "WINOOSKI".....	136
J. ERICSSON.....	170
JOHN A. GRISWOLD.....	188
MONITOR "KALAMAZOO".....	201
MONITOR "WEEHAWKEN" AND THE "IROQUOIS" WEATHERING OUT A GALE.....	285
FIGHT BETWEEN THE "MONITOR" AND "MERRIMACK".....	369
JAS. B. EADS.....	499
"ST. LOUIS," OR "BARON DE KALB," FIRST U. S. IRON-CLAD.....	508
BATTLE OF FORT HENRY.....	515
BATTLE OF MEMPHIS.....	578



HISTORY OF THE NAVY

DURING THE GREAT REBELLION.

CHAPTER I.

INTRODUCTORY.

EACH true state has a distinctive, individual character. Its political, religious, and social institutions, and all the forms which its civilization assumes, are but the embodying of national ideas. Every great nation, whether ancient or modern, stands forth separate, and even peculiar, as if endowed with an actual personality. Each one has shaped a form of religion, a style of art, an architecture, and a literature of its own, different from all others; and even in the army and navy, in weapons and methods of fighting, the national traits appear.

Colonies retain of course, for a long time, the peculiarities of the mother country, and assume but slowly, if at all, any distinctive features. It could not be expected, therefore, that an American nation, with an individual character, should suddenly appear upon this continent. Up to the present hour we have no truly national literature, or architecture, or costume; we have no art, or oratory, or poetry, which can be called distinctively American, and which have originated here. They are all modifications or imitations of European, and principally of English civilization. We are not, it is true, mere copyists. American thought has moulded what we have adopted, and in the arts which multiply man's power, and lessen the amount of labor to

obtain given results, in all that tends to lighten the burdens of the people, and increase their comforts and intelligence, we have far outstripped the rest of the world.

We have at length, however, through the pressure of the war, become in truth and in deed a nation. We are a consolidated state, we are clothed with the attributes of a great national power; and, from this time, we may probably date the beginnings of a distinctive American civilization. We have acquired the consciousness of strength; we have obtained, through the war, the materials for a literature and a history. The war itself had many distinctive and original features. It has been conducted as no other war has been. It was an American battle. It was fought on such a scale, with such masses of men, with such vast combinations, and with such weapons, as Europe never had seen. It was, in fact, the first grand national American act; and, more than all else, the Navy has been an original creation, a true outgrowth of distinctive American thought. In fact, from its beginning, the Navy has been the embodying of truly American ideas; and whatever question there may be in regard to any other feature of our civilization, no one will deny that there are American ships, American cannon, and an American Navy.

In the Army, European methods have been made more effective than ever before by the intelligence, the skill, and persistent courage of the American soldier; yet in the system of attack and defence, in tactics and strategy, there has been little that is new and peculiar; but the long, swift steamboat, the clipper-ship, with its great spread of canvas, and its unequalled speed, the heavy frigate, the frigate-like corvette, the armored ship, adopted in Europe, and last the Monitor, these and our "big guns" are original creations; they are the fruits of American thinking, the exponents of American character; and these, our thoughts, have had power to revolutionize the naval architecture and naval warfare of the world.

It is believed, therefore, that the Navy, with the armament of our war-vessels, and our ships of commerce, form the best exponent of our power of invention which the nation has yet produced; the highest proof yet given to the world that a new national life-power is building here a state with characteristics

as marked and peculiar as any of the great nations of antiquity—a nation presenting new forms of civilization, and representing, in many important features, the foremost thought of the age.

The maritime nations of Europe have employed all their inventive genius and skill, their science and mechanical art, in perfecting their navies, and making them, as they hoped, irresistible. The Americans in a few months, and as the first result of earnest effort, have produced ships and armaments, before unknown, that have rendered useless, and virtually stricken out of existence, the great navies of the world. Not only have the most formidable wooden vessels been reduced to utter weakness and helplessness, but the proudest armored, broadside ship of Europe, such as was deemed impregnable, would be destroyed in a fight with some of the new American vessels almost as easily as the wooden walls themselves. Such results should be studied by the people, because they show the originating and independent power of American mind, when operating on a large scale, and competing with the whole of Europe.

The most remarkable successes of the war—those which startled Europe, which caused England and France to feel that their naval supremacy had been stricken down by blows not aimed at them—were gained by means unknown before, by new applications of principles, and by hitherto unheard-of uses of machinery.

The new American artillery, the new war-ships, the changes wrought in old vessels by a new armament, the almost instantaneous transformation of a commercial marine into a blockading squadron, that could seal up the sea-coast from the Potomac to the Rio Grande, these are without any parallel in the history of war. They have no relation to the old stereotyped naval and military forms and methods; they are the creations of fresh and independent thinkers, who have been rudely criticised, ridiculed, and condemned as visionary or imbecile, because their thoughts were beyond, or outside, the common range of mind and of professional experience.

A mere narration, then, of the events of such a war can, in no proper sense, be received as a history of that war. The men who planned the methods of the battle, who contrived the new instruments used, the ideas out of which the successful action

sprung, the manner in which the new theories stood the test of practice, the stern ordeal of the fight—these should enter into the history; and those forces which lie back of events, and by which events are produced, should, as far as possible, be revealed.

True history records the birth of ideas, the progress of thought, and then relates the actions which are the results of thought; and if to these is added a proper setting forth of the leading spirits of the age, the originators of thought, then the movement of society, and the living forces which produced and controlled the movement, are presented.

To relate the mere fact that the Monitor, a small turreted ship, armed with eleven-inch guns, engaged the Merrimac, a large armored, broadside frigate, and that after a four hours' fight the frigate was compelled to withdraw, would add very little to real history; but the story becomes history when we learn the perils of that solemn hour, when we are made acquainted with the men who organized the fight, and with those who conducted it, and when we are taught to consider that the conflict was not between the mailed ships, their guns and crews, nor even between the North and the South, but between European and American thought; for the South had adopted, in the Merrimac, the European form of the iron-clad, with the exception of the sloping side. The battle, therefore, was to decide whether the American people had thinking power equal to their great occasion, and the decision of that one question was to determine whether Europe or America should control this Western Continent. Viewed in this light, the first battle of the iron-clads, in Hampton Roads, becomes one of the most important events in the real history of our age.

Two main ideas, which will be dwelt upon more at large in subsequent chapters, have shaped the American Navy, and they are the exact opposite of those adopted by the maritime powers of Europe. One is, to diminish the number of guns and increase the weight of the shot, which has been carried out in the armament of our wooden ships, almost from the beginning of the Navy. The other, the Monitor idea, is, to reduce the exposed surface of the iron-clad vessel so much, that on this small surface it can carry an impregnable armor, while in the two guns of

the armament is concentrated the weight and force of a heavy broadside; and the turret, by which the guns can be turned to any point in the horizon, gives in part the advantage of a greater number of cannon.

The European plan has been to increase the number and penetrating power of comparatively small guns, and enlarge the ship to carry them. The Americans have chosen for the attack the smashing power of the heavy shot, and for the defence a small surface of invulnerable armor. In the battle of Hampton Roads, America sent forth her two national ideas, imperfectly expressed in the original Monitor, to challenge, not only the South, but Europe, to a contest for supremacy on the seas. The event showed that, in the construction and armament of ships, America had been thinking ahead of Europe, had indeed out-thought the world. God was leading this nation to the position of the world's teacher in the application to political and social life of those principles upon which the progress of the race depends, and that four hours' fight demonstrated that she has the power needed for a great leader among the nations; and that Europe, so far from checking the progress of our Republic, must herself yield to the force of American thought.

Those who expect to find in these pages a history similar to those which have recorded the events of previous wars will, of course, be disappointed. The ships, the armaments, the manœuvres, the tactics and strategy of former battles have passed away as completely as the catapult and battering-ram, the helmet, and mail, and spear.

The old sailing ship, around which clusters all the former romance of the sea, is now, in battle, only a useless incumbrance, except as a floating battery, to be towed into and out of action. The terrible shell has displaced the solid shot for most of the ordinary operations of a fight. Fortifications that could defy the mightiest squadrons of sailing ships that ever floated, are demolished by steamers without serious injury to themselves; and narrow channels, where a sailing vessel would be perfectly helpless, are easily threaded by steam gunboats, sweeping away all land forces that come within reach of their long-range guns.

It is not a record of sea fights between squadrons or single ships, for few such took place, and none of them were similar to

what the world had known ; and yet, beyond all previous wars on the water, this was one of continual battle. In the ordinary course of operations in former warfare, few vessels had more than one battle in a long cruise. Many for months, and many during a whole war, were not engaged in a single fight, roaming the ocean in vain search of a foe.

But in this rebellion it was, except with the blockading squadrons, a scene of almost daily and even nightly battle—not often with ships, but with forts and earthwork batteries, with ambushed riflemen and field batteries, taken from point to point, on rivers where our steamers were passing, and with torpedoes in the channels and harbors, and torpedo-boats by night.

It was a war which, with its new machinery and new methods of operation, disproved all former theories, set at naught all calculations of previous experience, and introduced the sailor to new ships, to such cannon as he had never before handled, to places where a war-ship had never floated before, and to such fighting as had never been seen on the deck of a vessel.

While, therefore, the reader will meet with less of the usual events of a naval war, there will be found a greater variety of new and stirring incident than has been known in any previous naval conflict ; and the daily perils and labors of our seamen were greater than any to which sailors had been exposed before. They had none of the repose which is obtained by a long cruise, in which the only labor is to sail the ship, but every day brought its new dangers and its exhausting toil.

CHAPTER II.

ORGANIZATION OF THE NAVY DEPARTMENT.

THE conception which so many form of a department, as composed of a secretary and his clerks, will convey no adequate idea of the Navy Department. In some of its features it seems more like an independant organization than a mere branch of the General Government. Its relations and responsibilities to the central power are, it is true, the same with those of the other departments, yet it seems further removed than they from general knowledge and observation. Its operations and its wants are not so easily understood, because they are necessarily less known; and hence, perhaps, except when winning great victories, it is apt to be regarded with indifference, and even with suspicion. Its field of action and its whole work are peculiar, and therefore its organization must be peculiar also. It combines in itself so many branches of knowledge and labor, that it is quite impossible for one man, however great and wise, to be a proficient in them all; and hence, the men who superintend these different branches must hold to the chief, the relation, not of clerks, but rather of cabinet officers. It is clear that the head of such a Department should be a statesman, a constitutional lawyer, a judge of international law and national obligations. He should be thoroughly acquainted with the political movements of the country, and familiar with all its interests, while at the same time he should be a man of sound judgment in general business affairs and should possess executive ability of the highest order.

But such a man would be very unlikely to know much of many things belonging peculiarly to naval science, a knowledge of which is indispensable to the proper conduct of the Department; and hence the business which belongs to the naval pro-

fession is divided into bureaus, the heads of which are skilled in the particular branches committed to their care.

It was found, moreover, that the amount of business pressing upon each of these bureaus was so great as to completely absorb its head in the management of his own particular department, giving him little time for the consideration of questions of general policy; and as the Secretary could not be expected to study in person the wants and operations of these bureaus, some method was needed by which these could be arranged and combined, and presented in a general view for the consideration and decision of the Secretary himself.

The vast operations of the Department itself during the war were naturally divided into two great branches: one relating to affairs belonging particularly to the Navy, and perhaps more specifically to professional matters; and the other embracing civil transactions and the whole business machinery and operations of the Department. At the head of the first named of these divisions was placed the Assistant Secretary, who, having been himself an officer of the Navy of long experience and acknowledged skill, was supposed to be a competent judge of whatever belonged to ships, their outfit and armament, and of such plans as might be proposed for increasing the efficiency of the Navy. At the head of the other was one, called simply the Chief Clerk, a name which does not adequately describe the importance of the office, for upon him was laid not merely the superintendence of the clerical force, but the direct management of a large portion of the business operations of the Department. He was really a confidential secretary placed over one branch of the affairs of the Department, while the Assistant Secretary supervised that which belonged specifically to the ships, their outfit, armament, and operations—the plans and suggestions of both these officers being, of course, submitted to and decided upon by the Secretary himself.

Such, during the war, was the general organization and movement of the Department; but the dividing lines were not always strictly observed, because all were working in harmony and had confidence in each other. Each wrought in his own department, giving aid and counsel elsewhere when needed, and each strengthening as he could the hands of the Secretary.

The ability of a man to direct a government, to command an army, or to control a department, is often shown more clearly in the selection of his assistants than in the operations in which they subsequently engage.

The reason of this is apparent. It implies, first, a clear conception of the nature of his office, and of the plans to be executed; and then the rare sagacity to judge of the fitness of men for special positions and particular work. The man who possesses this power is able, as a general rule, to command success.

The Secretary of the Navy showed himself capable of so organizing his Department, that each head of a bureau seemed eminently suited to his place, and all worked harmoniously and skilfully together for the common end.

The manner in which the Department was conducted affords, however, the most convincing proof of the fitness of its officers for the high positions to which they were called. Their friends may proudly point to their administration of affairs as the best possible evidence of their integrity, their patriotism, and ability. It is idle to pretend that such results could have been reached by men of ordinary capacity, or that the chief of so successful an administration had no special adaptation to the grave duties of his office. The papers which from time to time were addressed to Congress direct, or to the various committees, present very clearly the comprehensiveness of the views of this department of our Government.

Very early in the struggle the real policy of France and England was apparent to the members of the Government; and so soon as it was fully revealed in the Trent case, the Secretary, as head of the Navy, felt it to be his peculiar duty to warn his countrymen of the danger, and induce them, if possible, to avoid a foreign war by such an exhibition of naval strength as would forbid an attack.

Congress was urged to consider the fact that a foreign war must be waged almost exclusively upon the ocean; and that, in view of the settled hostility of England and France, we ought to prepare ourselves to cope with their navies, through which alone they can strike us. It was urged that fear of our power, and especially of our naval strength, must always be our best security against foreign aggression. Competent persons were

sent to Europe to examine the dock-yards, machine-shops, and other means and appliances for the construction and maintenance of the navies of the great powers; and it was shown how inadequate all our means were for maintaining a great war on the sea, not because of any lack of inventive power, or mechanical skill, or of suitable material, but because our navy-yards, our dock-yards, our machine-shops, and our founderies were all on a contracted scale, and wholly inadequate to meet the demands of a great war, and especially a foreign war. The reports of the Department set in strong light the fact that such vast establishments as the nation requires cannot be extemporized in an hour of need and peril; and that we should not suppose that because we could suddenly fit out an effective blockading squadron from our merchant marine, we could also, from the same source, provide ships capable of meeting on equal terms the vessels which France and England have built especially for war, with every improvement which modern science can suggest.

The position of the Department in regard to the question of blockade is set forth in a subsequent chapter devoted to that point. The Secretary saw distinctly, and urged upon the attention of the Government, the essential point that the rebellion should be treated as a domestic question, with which foreign powers had no concern; that the insurgents were traitors, to be dealt with according to our own laws, and as entitled to no belligerent rights and no public recognition of any kind, and denying that they were in any sense a government among the nations.

It will doubtless be interesting to the reader to know something of the life of the chief of the Navy Department previous to the time when he was called to the head of this important branch of the Government. A few facts on this point have been collected, but the most important part of his life is embraced in his official career, and that is exhibited by his acts as they appear in the pages of this work.*

* GIDEON WELLES, Secretary of the Navy, was born in Glastenbury, in the county of Hartford, Conn., July 1, 1802. His parentage was of the primitive Puritan stock. Thomas Welles, the original emigrant of the family, settled in Hartford as early as 1636. He was the first treasurer of the colony, and subsequently its Gov-

Had the policy proposed by the Department been adopted by the Government, and if then England and France had

error. The estate in Glastenbury, where Mr. Welles was born, was purchased of the Indians by Governor Welles in 1640, and has never been alienated from the family, being now the property of his only surviving brother. Mr. Welles was several years at the Episcopal Academy in Cheshire, Conn., and at a later period he was with Captain Partridge, at Norwich University. Subsequently he read law with the late Chief-Justice Williams, and afterward with the Hon. W. W. Ellsworth, since a Judge of the Supreme Court of Connecticut. In January, 1826, he became editor and one of the proprietors of the *Hartford Times*. Mr. Welles continued to edit that paper until the close of Jackson's administration, and was one of its principal contributors until the repeal of the Missouri Compromise.

In 1827 he was elected to the Legislature, and was the youngest member of that body. He was repeatedly reelected until 1835, when he was appointed by the Legislature Comptroller of Public Accounts.

In the politics, legislative action, and important measures of the State, for more than thirty years, Mr. Welles has borne a distinguished part, and the policy advocated by him has ultimately been successful.

In 1835 Mr. Welles married Mary Jane Hale, of Lewistown, Pennsylvania, daughter of Elias W. Hale, a distinguished lawyer of Central Pennsylvania.

Upon the election of Judge Niles to the Senate, Mr. Welles was, in 1836, appointed postmaster at Hartford, then one of the largest and most important distributing offices in the country. He remained in this office until 1841, when he was removed by President Harrison. In 1842 he was elected by the people comptroller, the constitution having been changed, making that office an elective one. His administration of the duties of the comptroller's office—the chief financial office of the State—was marked by distinguished ability, and gave satisfaction to all parties.

In 1846 Mr. Polk, unsolicited and very unexpectedly, tendered him the office of chief of one of the naval bureaus, which he retained until the summer of 1849.

On the adjustment of the financial question, during the administration of Mr. Polk, Mr. Welles considered the mission of the old parties at an end—nothing but their organizations and the prejudices and antagonisms engendered by them remaining. In the mean time, new questions relating to the territorial policy of the Government as connected therewith arising, Mr. Welles, adhering to his original principles, maintained the Jeffersonian doctrine that slavery was the creature of local law, and should not be extended into the Territories through the agency or by the instrumentality of the Federal Government. The repeal of the Missouri Compromise, followed by the Kansas aggression, led to new party organizations. The Republican party came into existence, and, sympathizing in this movement, Mr. Welles took an early and active part in it, and was the candidate of that party for Governor in 1856.

From the day of its inception Mr. Welles threw his whole power and influence into the Republican movement. He was appointed by the Convention in Philadelphia, in 1856, a member of the Republican National Committee, and was one of its executive members then and until after Mr. Lincoln's election. He was also chairman of the Connecticut delegation to the Chicago Convention. On the formation of the Republican party, the establishment of a paper to sustain the views of that party in Connecticut became necessary, and the *Hartford Press*, now one of the leading and

declared as they did both parties equal belligerents, they would have been bound by this concession of belligerent rights

most influential journals in the State, was commenced, and Mr. Welles was one of its principal contributors.

When Mr. Lincoln took the Presidential chair, in March, 1861, Mr. Welles was invited to a seat in the Cabinet, as Secretary of the Navy. The breaking out of the rebellion soon made it evident that the post was one of the greatest responsibility. In the language of the annual report of the Secretary, dated December 2, 1861, "the Navy was called upon, at the same time, to prepare for and accomplish a triple task, more arduous, it is believed, in some respects, than has before been demanded of the maritime power of any government." This was—

"1. The closing of all the insurgent ports along a coast line of nearly three thousand miles, in the form and under the exacting regulations of an international blockade, including the naval occupation and defence of the Potomac River, from its mouth to the Federal capital, as the boundary line between Maryland and Virginia, and also the main commercial avenue to the principal base of our military operations.

"2. The organization of combined naval and military expeditions to operate in force against various points of the Southern coast, rendering efficient coöperation with the position and movements of such expeditions when landed, and including also all needful naval aid to the Army in cutting off intercommunication with the rebels, and in its operations on the Mississippi and its tributaries; and

"3. The active pursuit of the piratical cruisers which might escape the vigilance of the blockading force and put to sea from the rebel ports."

Some idea of the labor necessary effectually to enforce the blockade along a line of coast, subsequently ascertained by official data to be three thousand five hundred and forty-nine statute miles in length, may be formed from the fact that in this coast are one hundred and eighty-nine openings, in one hundred and forty-four of which vessels drawing at least six feet of water can enter.

The whole management of the Navy, under the administration of Mr. Welles, indicates successful administrative ability. It has been quiet and unobtrusive, but firm and sagacious. No department of the Government has been more ungenerously assailed, and sometimes from quarters unexpected, and where it might have anticipated support; but the results have evinced the wisdom and the grasp of the Secretary, who was persistent and resolute under all discouragements, infusing a patriotic and Union sentiment into the service, and animating it with a spirit which has made itself felt in successful conflicts that have added to our naval renown.

In the performance of official duty, however arduous and important, Mr. Welles always avoided all obtrusiveness and ostentation. He never sought to create a sensation. Clearness and sobriety of judgment, enlarged and accurate appreciation of the wants of that arm of public defence which he has been called to strengthen and to wield, indefatigable industry and perseverance in labor, and an unshaken firmness of purpose, resulting from patient reflection upon which his conclusions have been formed—these are some of the qualities which characterized him as an administrative officer.

The character of Mr. Welles is better illustrated by the manner in which his department was conducted, as will very clearly be shown in the course of the history.

to us as against themselves and their ships; while our Government, in all its dealings with the insurgents themselves, would still have been at liberty to treat the insurrection as a domestic question, and the insurgents as guilty of treason. This is true, because England could determine by proclamation only her own relations to us and to them, but had no authority to decide in what manner the rebels should be treated by the Government of the United States. If we, then, chose to blockade the Southern ports, England and France could not complain, because they had proclaimed the rebels to be lawful belligerents. If we had chosen, instead of a blockade, to close our ports, they had no right to interfere with a question which we declared a domestic one, with which other nations could have no concern. Had these principles been clearly stated and firmly held in the beginning, the Government asserting its own unlimited sovereignty over the rebels, exercising as against England and her ships the belligerent rights she conceded to us, and dealing with the rebels as a sovereign with subjects in revolt and guilty of treason, then, at the close of the war, no one could have disputed that the insurgents were simply captured traitors, who had forfeited every civil and political right, and the question of their being readmitted to their former position and privileges when they laid down their arms could never have been raised.

On the other hand, had the Government boldly stated and firmly held the doctrine which was really implied in the manner of establishing the blockade, though not asserted, that the Confederates had established a government and must be treated according to international law, and as belligerents, which idea was acted upon in establishing a system of exchanges of prisoners, then their allegiance with the United States was really severed, and at the close of the war they had only the rights of conquered enemies, with no shadow of a claim to be admitted to any share in the Government.

The influence of the Navy Department upon another important feature of national policy may be properly mentioned here. It is not generally known that the very first blow struck by the Government at the system of slavery came from the Navy Department. The very first step in the right direction was taken by Secretary Welles. In this respect, the Navy was in advance

of every other department of the Government; it was the true pioneer in that policy which deprived the rebels of their strength, and resulted in universal emancipation. The decks of our ships were the places where first of all the manhood of the slave was recognized, where first he felt himself protected by the American flag. If nothing else had been done by the Navy during the war, it should still be endeared to every true patriot, to every true friend of Christian freedom, because, in advance of all other movements, it struck the fetter from the slave by authority of one of the departments of the Government.

Long before the Fugitive-Slave Law had been repealed, and while the officers of the Army were returning to their masters the slaves who were ready and anxious to fight our battles, as well as to secure their own freedom, the deck of the national ship furnished to them a secure asylum—a spot not subjected to the search of the master, and from which the fugitive could not be forced away.

The Department took at first the bold and true position that the Government, as such, knew nothing of slaves—that it recognized men only; and that if a loyal man, from a rebel State, came on board our ships, whether black or white, he was to receive protection, and in no case was he to be returned to his master. Nor did the measures of the Department cease with bare protection. It was seen that the slaves were an element of strength which should not only be subtracted from the rebels, but that it should be added to our own power, and thus the cause of the rebellion would receive a double detriment. The Secretary, therefore, in advance of all movements, even in Congress, and as early as July 22, 1861, issued the following order, occasioned by the letters which are here presented:

U. S. STEAMER MINNESOTA, HAMPTON ROADS, *July 18, 1861.*

HON. GIDEON WELLES, *Secretary of the Navy:*

SIR: I have the honor to enclose to the Department copies of reports, July 15 and 17, of Commander O. S. Glisson, of the Mount Vernon, with a request by him to me that I shall instruct him what to do with the negroes on board his vessel, and with others that may come.

If negroes are to be used in this contest, I have no hesitation in saying they should be used to preserve the Government, not to destroy it.

These men are destitute. Shall I ration them? They may be serviceable on board our storeship.

Respectfully, your obedient servant,

S. H. STRINGHAM,

Flag-Officer, Atlantic Blockading Squadron.

U. S. STEAMER MOUNT VERNON, RAPPAHANNOCK, July 15, 1861.

SIR: I have to report that this morning at daylight we observed a boat adrift near Stingaree light-house. We manned a boat, armed her, and sent her with an officer to pick up the boat, and to ascertain who was in the light-house.

At 8 h. 30 m. the boat returned, bringing with her six negroes who had deserted from the shore during the night, and taken shelter in the light-house, casting their boat adrift to avoid detection.

They appear to be very much frightened, and state that the people on shore are about arming the negroes, with the intention of placing them in the front of battle. Their taking this course has caused much excitement amongst the negro population, who are deserting in every direction. Two other boats made their escape last night, with hope of being picked up by some vessel passing in the bay.

I have rationed these negroes on board of this vessel, until I receive orders from you as to their disposal. Enclosed I forward you a list of these slaves, together with a list of the names of their owners.

I am, sir, very respectfully, your obedient servant,

O. S. GLISSON, *Commander U. S. Navy.*

To Flag-Officer SILAS H. STRINGHAM,

Commanding the Atlantic Blockading Squadron, etc., etc.

U. S. STEAMER MOUNT VERNON, RAPPAHANNOCK, July 17, 1861.

SIR: I have to report that three more slaves, named respectively Lewis Ransom, Robert Brooks, and Albert Hutchings, belonging to John H. Dunlavy, of Matthews County, Virginia, gave themselves up this morning.

Will you please inform me how I shall dispose of these men, and how I shall act in future when they come on board? They say that, if they should be returned, they would be murdered.

We are all well on board, and every thing is quiet off the Rappahannock. I am, sir, very respectfully, your obedient servant,

O. S. GLISSON, *Commander U. S. Navy.*

To Flag-Officer SILAS H. STRINGHAM,

Commanding the Atlantic Blockading Squadron.

NAVY DEPARTMENT, July 22, 1861.

SIR: Your dispatch No. 70, in relation to certain negroes who have fled from Virginia and are on board the Mount Vernon—asking what disposition shall be made of them—is received.

It is not the policy of the Government to invite or encourage this class of desertions; and yet, under the circumstances, no other course than that pursued by Commander Glisson could be adopted without violating every principle of humanity. To return them would be impolitic as well as cruel; and, as you remark, "they may be made serviceable on board our storeship," you will do well to employ them.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Flag-Officer S. H. STRINGHAM,
Commanding Atlantic Blockading Squadron,
Hampton Roads, Va.

For this order the Secretary will not fail to receive from every friend of freedom and from every true patriot the honor due. It not only commands a right thing to be done, but it asserts a motive worthy both of the statesman and the Christian. To return them, he says, would be contrary to every principle of humanity; a right noble assertion. The deck of an American ship shall not become at the demand of a slave-master, a spot where every principle of humanity shall be violated, in delivering up the fugitive. The American sailor and the flag shall not thus be disgraced.

And the Secretary further states that it would be *impolitic* as well as cruel, to return these men to slavery. Thus early he adopted the only statesmanlike policy of conducting the war on the true principles of war. He never adopted himself, nor sanctioned for others, the well-nigh fatal course of regarding the conspirators as friends who had forfeited no rights, and who must not be weakened or distressed by using or destroying their property, or by freeing and employing their slaves.

Nor does this course subject him to any proper charge of violating the laws of the Constitution, because the Fugitive-Slave Law was not then repealed.

He saw from the beginning, what was afterward admitted by all but rebels and their friends—that the traitors had forfeited all rights by their act of war, and had, therefore, lost

whatever title they claimed before the war to control the services of a loyal man. The following order, dated September 25, 1861, will show how early the Department settled another important question; and all can now see that if it had been treated firmly and steadily in the same manner, at the same time, in the Army, the war would have been finished far sooner than it actually was :

NAVY DEPARTMENT, *September 25, 1861.*

SIR : The Department finds it necessary to adopt a regulation with respect to the large and increasing number of persons of color, commonly known as "contrabands," now subsisted at the navy-yards and on board ships-of-war.

These can neither be expelled from the service, to which they have resorted, nor can they be maintained unemployed, and it is not proper that they should be compelled to render necessary and regular services, without a stated compensation. You are therefore authorized, when their services can be made useful, to enlist them for the naval service, under the same forms and regulations as apply to other enlistments. They will be allowed, however, no higher rating than "boys," at a compensation of ten dollars per month and one ration per day.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Flag-Officer S. F. Du Pont,

Commanding South Atlantic Blockading Squadron, and others.

This settled, so far as the Navy Department was concerned, a policy which was not finally determined upon in the Army and by Congress until 1863. The following letter, dated July 2, 1862, will show that the enlistment of negroes in the Navy was carried on precisely as it was for others, and from the early part of the war the true policy was adopted and steadily pursued :

NAVY DEPARTMENT, *July 2, 1862.*

SIR : Among the persons known as "contrabands," who have sought the protection of the United States, please ascertain if there are any men physically competent to enlist in the Navy for service in the Pacific, at landsmen's wages.

If so, a vessel will be sent to take one hundred and fifty of them to the Isthmus. About the same number could be used advantageously

in the vessels now fitting for sea, as shipping does not keep pace with the naval wants.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Flag-Officer S. F. Du Pont,

Commanding S. A. B. Squadron, Port Royal, S. C.

In giving what is considered to be this just praise to the Department, it is not forgotten that occasional and fitful efforts were early made by some of the officers of the Army to establish a similar policy, nor that Secretary Cameron recommended the employment of the slaves; but the policy for the Army was not established, and, on the contrary, the main influence of that department, in the first years of the war, was thrown in the opposite direction; and the orders of leading generals, such as Halleck, McClellan, Sherman, Hooker, and even the modifications by the President of Secretary Cameron's report, all prove that no cherishing, welcoming influence was extended by the Army, as a whole, to the slave until his services became a military necessity.

In the Navy, on the other hand, he was from the very first kindly received, protected, and employed for wages; and almost from the first, the colored able-bodied loyal men were freely enlisted without any regard to what their previous condition had been. The Navy really inaugurated the policy of emancipation, which, when afterward made general, was the means of saving the country.

Surrounded as the Government was by traitors on every side in the beginning of the war, in every department, and in every field of its operations, it was impossible to ferret them all out, and rid the service of their dangerous and corrupting presence; but the intense hostility of the Secretary to every form of disloyalty made him ever watchful to discover and prompt to punish or reprove the least unfaithfulness which endangered our cause.

The Department was not disposed to tolerate even apathy. It especially and justly demanded, that every officer in the service of the Government should devote his best talents to his country's interest; and sometimes, as in the case mentioned in

one of the letters here quoted, it was willing to risk a possible injustice rather than to peril the national cause. The result of this vigilance was, that the Navy was very thoroughly purged of the disloyal element, and very few remained whose hearts were not in the work. The apathetic, the inefficient, the hesitating, delaying ones were removed as fast and far as it was possible to do it; and no more unjust charge was ever made than that of inactivity and inefficiency which some brought against the Navy. The country during the war knew little of the labors, and perils, and hardships of our seamen. The following letters will show how anxiously the condition of the Navy was watched:

[CONFIDENTIAL.]

NAVY DEPARTMENT, *August 24, 1861.*

SIR: There are complaints and rumors of unfaithful and disloyal officers in the squadron under your command. Many, and it is to be hoped most, of these complaints are without substantial foundation; but it is undeniable that the Navy has been sadly demoralized, and it is apprehended there may be some tainted with infidelity to the Government they profess to serve. Justice to the true and patriotic officers who are nobly vindicating their own honor and that of the Navy in these days of peril, as well as the first obligation which all owe to the Government and the country, require the arrest and prompt dismissal of every officer tainted with disloyal sentiments.

You will, therefore, be vigilant to scrutinize and detect any symptoms of treason or infidelity, tempering decision with moderation, and exercising a nice and calm discretion, avoiding giving offence that shall touch the sensibilities of a faithful officer on points where he is most sensitive. In these matters all of us have thankless but necessary duties to perform.

I send herewith a copy of a letter received at the Department from a gentleman of the first respectability. You will endeavor to investigate the facts communicated, and if satisfied they are authentic, take immediate means to have the matter corrected.

Very respectfully, etc.,

GIDEON WELLES.

*Flag-Officer WM. MERVINE,
Commanding Gulf Blockading Squadron,
Key West, Florida.*

[CONFIDENTIAL.]

NAVY DEPARTMENT, November 25, 1861.

SIR: Since the efficiency of the blockade depends in a great measure upon the professional skill of each individual commander, the Department enjoins upon the flag-officers a vigilant supervision of the movements of each vessel under their command. A large number of most efficient steamers are being pressed to completion, and the Department desires to assign these, as far as the public service will admit, to those officers who have performed at sea most faithfully the duties of the blockade. You will, therefore, keep the Department advised of the relative merit of each and every commander attached to your squadron, and take care that no case of individual merit, or the reverse, occurs without a full investigation and report to the Department. The Department also desires a particular report relative to the officers formerly in the Navy and now serving under acting appointments, and those now attached to sea-going vessels who are on the retired list. As full authority is given to the flag-officers to send home the inefficient and apathetic, and make any changes in the commanding officers that the public service demands, the Government will hold them responsible for the efficiency of each single ship. Rank has its merits, but no consideration will be given to it unless accompanied with earnest devotion to the suppression of this rebellion, and professional fidelity to the duties imposed.

Very respectfully, etc.,

GIDEON WELLES.

*Flag-Officer S. F. Du Pont,
Commanding South Atlantic Blockading Squadron,
Port Royal, S. C., and other flag-officers.*

NAVY DEPARTMENT, May 30, 1862.

SIR: The Department addressed to you a letter, dated 23d ultimo, the closing paragraph of which required a reply, rather than a simple acknowledgment of its receipt. At a period like this, surrounded as the Government has been by traitors and lukewarm supporters, it is the duty of the Department to require of all its officers an acknowledgment of their intentions, without equivocation or evasion. If you are on the side of the Government in this unholy rebellion, you should have no hesitation in writing the fact. If otherwise, you should vacate your commission at once. You will also explain the meaning of the sentence in your letter to Captain Gardner, wherein you state your willingness to abide by the oath while you remain in the service.

I am, respectfully, your obedient servant,

GIDEON WELLES.

NAVY DEPARTMENT, *October 2, 1861.*

SIR: * * * * At a time like this, the Department must insist on its right and duty to make such selections as it deems will best promote the public welfare, without regard to personal pretensions; and while it would treat with all tenderness and kindness every officer, and especially veterans like yourself, it cannot permit individual considerations to influence and control its action.

That "the best energies of your mind and body have been assiduously and laboriously devoted to carrying out the instructions of the Government" may be admitted without the formality of a court; but all men are not alike constituted, and other and different qualities, mental or physical, than yours may be deemed requisite at this period, without the implication of crime or fault on your part. In selecting you to command the — no partiality was exercised, nor has any prejudice induced a change. Only the true and best interests of the country have been consulted in what has been done, and the Department must judge of men as well as means best adapted to carry into effect its views.

Neither the time nor the service in this crisis can be wasted in courts of inquiry or courts-martial, growing out of the substitution of one officer for another for any duty. Mere forms and rank cannot be permitted to control efficient and necessary action in an emergency like this, nor can officers be withdrawn from duty unless for reasons of great public necessity. As no such necessity exists in consequence of substituting one officer for another as —, I must decline ordering a court of inquiry or a court-martial in your case.

I am, respectfully, your obedient servant,

GIDEON WELLES.

So great was the peril of the country, in the Secretary's opinion, from disloyal officers, that the measures he felt compelled to adopt to protect the interests of the Union, were thought by some to be needless and unjust. But the life of the nation was at stake, and it was thought better, even if temporary injustice should be done to some, that at all hazards that life should be guarded against treason.

At the breaking out of the rebellion, many officers from the Southern States were on foreign stations, whose sentiments were unknown, and in regard to whom, considering the example of so many nearer home, there was much to fear. It could not be doubted that they would be urged by every possible influence

to unite with their States against the General Government; and should they do so, the national ships under their command could be easily taken into Southern ports, and thus the traitors would at once be supplied with a navy.

The Secretary took the precautionary measure of relieving such officers from command, even when there was no special reason to doubt their loyalty; and thus the Navy was secured against a possible peril. In some cases it was found that no cause existed for such removals; and then a prompt explanation and the proper amend were made, and ample justice was done. The following is one of the letters in regard to such cases, and will serve to explain the Secretary's course:

NAVY DEPARTMENT, *October 14, 1861.*

SIR: Your letter of July 10th, written before you were aware that the Department had relieved you of your command, as well as subsequent dispatches, and your personal report on Saturday last, the day of your return, have impressed me most favorably in regard to your loyalty and patriotism as an officer, and your high sense of duty and honor as a man.

Among the most painful and trying duties that have devolved upon me in administering the affairs of this Department, has been that of deciding what course of policy to pursue toward officers from the regions that are in insurrection who were intrusted with positions of responsibility on distant stations. Not knowing their opinions and feelings on questions involving the integrity of the Union and the existence of the Government, unable to ascertain them, except indirectly, and by inference and conclusions drawn from their associations and other circumstances, neither satisfactory nor reliable, I was compelled to act in some instances with apparent harshness, and with a severity I did not feel toward gentlemen sensitive as regarded their honor and professional obligations. Such was my action in sending an officer to relieve you against whom there was not an imputation, and of whom I knew nothing derogatory as an officer or a man. Others from the same section, who, until the culmination of the conspiracy, had served long and apparently with fidelity, and whom, until their disloyalty was disclosed, I had no reason to distrust, assumed that their obligations to their State or section were paramount to their allegiance to the country. Some who had been most trusted had proved most faithless. Without any means in my possession to discriminate between the faithful and the faithless, I was compelled to act, and in doing so I have done yourself and others injustice. It was an unavoidable necessity, and it gives me pleasure, I assure you,

to atone so far as I can now, personally and officially, for the wrong inflicted, by expressing to you, as I do most earnestly, my profound regret that I had no means of knowing your sentiments as I now know them, and to say, as I do in all sincerity, that had I known them in season, you would not have been detached from your command.

Your letter—the promptings of a generous mind—satisfies me that you have a right appreciation of my motives, and of the overruling necessity by which I was compelled to act.

Wishing you every success, and hoping the Government will have an opportunity of availing itself of your active services,

I am, very respectfully, your obedient servant,

GIDEON WELLES.

The standing charge which, without fail, comes from some quarter against every administration and every department, is extravagance and carelessness in the use of the public funds. It would have been an unheard-of thing if no one had brought such an accusation against the Secretary of the Navy. The manner in which the Department first undertook to provide itself with ships for a blockading squadron is described in another chapter. The purchase was committed, first of all, to officers of the Navy, assisted by business men. The spirit and intention of the Department are well set forth in the following letter, addressed to all the officers who had this business in charge. Investigations made by those who, from personal feelings, endeavored to show mismanagement in the Navy, failed to disclose any thing in the operations of the Department at variance with the tone and policy of this letter of instructions. Abuses of confidence, perhaps, can be shown, for all men are not strictly upright; but evidently the Secretary did what he could to guard the public interests:

NAVY DEPARTMENT, *September 20, 1861.*

SIR: Under the present exigencies of the service, the large purchases and repairs of vessels, and other expenditures, great power is delegated to you, and with it great responsibility. In exercising the authority with which you are necessarily invested, and especially in all that involves the expenditure of money, I feel it a duty to urge upon you a strict regard to economy.

Let me also urge upon you the importance of promptness in prepar-

ing and equipping the vessels, and that you devote your whole time and attention to the completion and discharge of the duties with which you are intrusted. We are in the midst of a formidable rebellion, and every man is required to use his best efforts in behalf of his country.

Promptitude, vigilance, and economy are urged upon you. Scrutinize closely all bills that you approve, for you will be held to a close accountability, not only for dispatch, but for expenditures.

I am, respectfully, your obedient servant,

GIDEON WELLES.

INSTRUCTIONS IN REGARD TO THE BLOCKADE, URGING WATCHFULNESS, ACTIVITY, AND THE FIRM ASSERTION OF OUR RIGHTS.

It was thought by some, during the war, to be a proof of remissness or incompetency in the management of the Navy, that so many vessels were enabled to run the blockade; and it was believed that those whose success was known, were only a part of a much larger number equally successful, of which the public knew nothing. Two facts were overlooked: first, the extreme difficulty of maintaining an efficient blockade along a coast-line three thousand five hundred miles long, and this coast, by its bays and sounds, presenting a double front to be guarded for a large part of the entire distance, so that the wonder was that any thing could be kept out, rather than that some escaped the vigilance of our cruisers; and second, it was the interest of the rebels to publish every instance of success, so as to encourage others, and show the inefficiency of the blockade, and induce foreign powers to disregard it, if possible. The activity and success of the blockading squadron is now clearly proved by the great and acknowledged destitution throughout the South, and by the significant fact that at the close of the war the cotton which still remained in the South, and which could not be shipped because of the stringency of the blockade, was worth in currency \$400,000,000, or in gold \$300,000,000, which amount came in various forms to the relief of the nation. The following letters will show the spirit of the Department, the principles upon which the Blockade was conducted, and especially the firmness with which American rights were insisted upon in the case of the French tobacco at Richmond, when the State Department seemed inclined to grant the right of shipment:

NAVY DEPARTMENT, *April 10, 1862.*

SIR: I have the honor to acknowledge the reference to this Department of your letter of the 2d instant, addressed to the honorable Secretary of War, communicating the request of M. Mercier, the minister of France, for a permit for an agent to visit Richmond for the purpose of having some tobacco, the property of French subjects, delivered into the hands of the French consul there. The Secretary of War also furnishes me with a copy of his letter to you, in which he considers the question involved as one affecting the blockade.

The "request" of M. Mercier, which you mention as being transmitted with your letter, did not accompany it, and the Department is not therefore informed whether any step further than the mere delivery of the tobacco into the hands of the consul is contemplated. If not, I think the question of a permit is not a matter pertaining to the Navy Department.

Under no circumstances, however, can the tobacco be permitted to be exported during the existing blockade of Virginia.

I am, very respectfully, your obedient servant,

GIDEON WELLES.

Hon. WM. H. SEWARD, Secretary of State.

NAVY DEPARTMENT, *September 25, 1862.*

SIR: I have received your letter of the 24th instant, reporting the proceedings of the flotilla, and in reference to trade with the Virginia shore.

You will allow no vessel to import or export merchandise at any port of the blockaded country. Alexandria is the only port open for general traffic within the limits of your command.

You will not regard what are called "permits" from any officer except the Secretaries of the Treasury, War, or Navy, as authorizing the ingress or egress of any vessel in violation of the blockade.

There must be no favoritism or license given to any one or more of our countrymen to traffic within the blockaded region, or to import or export merchandise. That would be justly considered as evasive of the blockade, and in bad faith.

No officer of the Army or Navy is authorized to grant permits, and you will seize all vessels engaged in illegal traffic.

Such vessels as, under the authority of the War or Navy Department, may be engaged to carry supplies to the Army or Navy, will take no return cargo from the territory blockaded. The blockade is intended

to *interdict all trade whatever* with the country blockaded, during its continuance, and should be rigidly enforced.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Commodore A. A. HARWOOD,

Commanding Potomac Flotilla, etc., Washington, D. C.

NAVY DEPARTMENT, *August 29, 1862.*

SIR: Yours, No. 85, bearing date the 18th instant, inquiring of the Department whether it is expedient to seize ships that are from Liverpool, bound to Nassau, or from one British port to another, has been received.

In reply, the Department directs that you visit, without regard to their clearance or destination, all vessels not being public armed ships-of-war of foreign powers, and that in the case of all vessels carrying cargo or engaged in commerce, and not being regular mail steam-packets engaged in the regular and stated mail service of foreign governments, you will, during the visit, exercise the unquestioned belligerent right of search; and if upon strict search it shall appear that arms or contraband of war constitute the cargo or such part thereof as would render aid to the enemy, then you will exercise the no less unquestioned belligerent right of seizing such cargo and vessel and sending in the same for adjudication.

This being an ungracious task, it should be done in a spirit and manner not offensive. Judgment and discretion must be exercised. To seize does not necessarily involve condemnation; the courts will adjudge the whole question of prize or no prize. The more specific and detailed instructions, recently transmitted, will guide the officers in their duty.

The Department has made it a special object to obtain, and communicate to the commanding officers of the squadrons enforcing the blockade, information in regard to vessels which were preparing or believed to be preparing to give aid to the insurgents. The information derived in various ways may not always be authentic, and is of such a character as should not be communicated to the captured parties. It is a mere indication to our own officers to guide and assist them in their duties. A search will corroborate and confirm the intelligence, if correct; and without a search that shall furnish reason to believe the vessel has contraband of war, or is designed to violate the blockade, or in some way aid the insurgents, she should not be seized.

I am thus particular on this point, because it has been intimated that some officers construed the indication that is given them of a sus-

pected vessel, into an order for her seizure without a search. Others appear not to have informed themselves of the belligerent right of search, and, by a culpable omission of its enforcement, have permitted vessels which it was their duty to have seized, to pass unmolested.

It is to avoid a repetition of these errors that this communication is made in detail.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Commodore JAMES L. LARDNER,

Commanding East Gulf Blockading Squadron,

Key West, Florida.

[CONFIDENTIAL.]

NAVY DEPARTMENT, September 3, 1861.

SIR: The condition of public affairs is such, that the country demands that the best men in the service should be called upon to command her navies and armies. In the efforts of the Government to suppress the causeless conspiracy that has been organized against it, high and responsible duties devolve on the Navy, and especially on the squadron in the Gulf. It is absolutely essential that the interdiction of commerce with the insurgents should be rigidly enforced; and to that end the best talents in the service are required at every point on the extended coast guarded by our squadrons. The energy and promptitude displayed by yourself on various occasions have impressed the Department with the conviction that the country will be benefited by assigning you to a more responsible position, and I have therefore intrusted to you the command of the squadron in the Gulf. From the orders and instructions heretofore issued to your predecessor, and which he will transfer to you, the general views and policy of the Department and the Government will be obtained. But much, after all, must be committed to the judgment and discretion of the flag-officer, who will make his own decisions and act on his own responsibility, without waiting orders or receiving specific instructions from the Department, in the emergencies that must necessarily arise. It is because I have confidence in your judgment, as well as in your energy and force of character, that I have called you to this important command.

You have a difficult duty to perform, but this you will meet with alacrity, and I feel assured will surmount, to your own and the country's satisfaction.

To lock up the outlets of the great central valley of the continent, so that her products in that portion of the insurgent States shall not reach

the ocean, and so that the craving wants of her population for the products of other lands shall not be supplied while their hands are raised against the Government, will demand your special attention.

I need not enlarge upon its importance, and of the embarrassments you will experience in closing the passes and numerous bayous and inlets along the whole coast. These difficulties will present themselves to you; and on the resources of your own mind, with such assistance as the Department can send you, must you rely to remove them. Such information as we receive will be forwarded to you from time to time by the first opportunity.

Some important suggestions in relation to closing the Mississippi by fortifications as well as by vessels have been made, and will demand your earnest and immediate attention. The batteries on Ship Island and at other important points have perhaps become formidable, and may require additional force to demolish or capture them.

But on these, and indeed all other questions, we shall rely on your capacity, sound discretion, judgment, and decision. In these I have great confidence, as well as in the rightfulness of our cause.

There are in our Navy ability and power which, if drawn out and given scope, will do honor to the service and the country. The ambition and energies of these men must not be repressed by mere forms; and times and exigencies like these will develop character and efficiency. Such materials you will have opportunity to encourage and promote, and I commend them to your consideration.

Report frequently and fully to the Department. Wishing you every success, and in the belief that you will attain it,

I am, respectfully, your obedient servant,

GIDEON WELLES.

Flag-Officer W. W. McKean,

Commanding Gulf Blockading Squadron, Key West, Fla.

[CONFIDENTIAL.]

NAVY DEPARTMENT, *September 18, 1861.*

SIR: The conspiracy against the Government and the Union is of so formidable a character, and has been so long persisted in, that more vigorous and energetic action must be taken for its suppression. It is essentially necessary that the Navy should at this time put forth all its strength, and demonstrate to the country and to foreign powers its usefulness and capability in protecting and supporting the Government and the Union. There must be no commercial intercourse with the ports that are in insurrection; and our Navy must, by its power, energy, and

activity, enforce the views of the President and the Government on this subject. Privateers to depredate on our commerce, and rob our countrymen pursuing their peaceful avocations, must not be permitted. As an important part of our operations, there are also to be demonstrations at points upon the coast that will hereafter be indicated, in the prosecution of the policy adopted to quell the insurrection.

So far as is practicable, in the time and with the means and material that could be made available, the Department has provided the vessels and the force requisite to carry into effect the policy of the Government; and on the ability of our naval officers, and their proper selection for and adaptation to the duties committed to them, depend the faithful and successful execution of the great work of enforcing national supremacy, and maintaining our laws and our rights on our extended maritime frontier. In view of the great responsibility that devolves on our flag-officers in this emergency, the necessity of constant supervision and attention, and the important movements projected, it is advisable there should be a subdivision of the squadron on the Atlantic coast. It is also indispensable that the Department should avail itself of the best talents in the service, and no Navy in the world has better, provided an opportunity is afforded for its development. Rank has its merits and claims, is always to be respected, and in peaceable times may be recognized and regarded; but when difficulties like the present are impending, the Department cannot permit its action to be restricted, and the welfare of the country endangered, by this consideration merely.

I have made these general preliminary observations that you may be possessed of the policy of the Department and the Government in carrying forward hostilities to the final consummation of the great work before us.

The division of the Atlantic Squadron would probably have involved the retirement of Flag-Officer Stringham; but that gentleman having tendered his resignation in advance of the consummation of the proposed arrangement, you will proceed forthwith to relieve him, and carry into effect the orders which he will deliver to you.

Your ultimate command will embrace the waters of North Carolina and Virginia, exclusive of the Potomac; but until the arrival of Captain Du Pont, who has been designated for the Southern division, you will assume the command and direct the movements of the entire squadron to Cape Florida.

It is the especial wish of the Department that the preparations made at no inconsiderable labor and expense for the obstruction of the inlets on the North Carolina coast, neglected since the capture of Hatteras, which was but a part of the original expedition, should be executed with

as little delay as possible. In the instructions of the 3d September, directions are given not to sink vessels in Ocracoke Inlet; but, on further advisement, it is deemed necessary that it should be done on the inner bulkhead.

Leaves of absence to the officers arriving at Hampton Roads cannot be granted except in cases of sickness.

Whatever force you consider necessary to prevent the egress of the armed steamers of the rebels from James River, you can keep in Hampton Roads; but you will notify General Wool that blockading is your principal duty, and you will govern yourself accordingly.

Very respectfully, etc., GIDEON WELLES.

Flag-Officer L. M. GOLDSBOROUGH,

*Appointed to command Atlantic Blockading Squadron,
Hampton Roads, Va.*

[CONFIDENTIAL.]

NAVY DEPARTMENT, October 12, 1861.

SIR: In order to suppress the present insurrection, and maintain our Union and nationality, the Government cannot delay vigorous and effective measures upon our Southern coast. By the proclamation of the President on the 19th of April, a blockade has been declared, and commercial intercourse with the region of country that is in insurrection interdicted. In order to carry into effect the measures of the Government, which are persistently sought to be evaded, and to extinguish the rebellion, it is necessary to take possession of certain important points upon our Southern coast where our squadrons may find shelter and have a depot, and from which the loyal citizens of these quarters may be protected.

In examining the various points upon the coast, it has been ascertained that Bull's Bay, St. Helena, Port Royal, and Fernandina, are each and all accessible and desirable points for the purposes indicated, and the Government has decided to take possession of at least two of them. Which of the two shall be thus occupied will be committed to your discretion after obtaining the best information you can in regard to them. Much must necessarily be left to the combined wisdom and judgment of yourself and the general in command, after you shall have obtained the facts and details.

The long and elaborate investigation which you have given the subject during the summer and fall as a member of the Board selected for that especial object, enables you, with the free communication you have had with the Department, to bring to the subject a very thorough knowledge of the whole details and purposes of the Government.

The men and means embarked in this expedition are of such magnitude, that the country has reason to expect therefrom great and gratifying results. It is believed that no more effective blows can be inflicted upon those who are engaged in this causeless and unnatural rebellion than by naval expeditions and demonstrations on the coast.

Great power is necessarily intrusted to you, and with it great confidence in your discretion, courage, and ability to guide and direct the energies of the brave and loyal men who gladly peril their lives under your lead to vindicate the nationality of the flag, sustain the integrity of the Union, maintain the supremacy of the Constitution, and enforce the execution of the laws. On your well-directed efforts and those of your associates will depend in a great degree the speedy and successful termination of this unhappy contest.

It is proper that I should enjoin upon you to improve every favorable opportunity to cultivate friendly feelings with the people, and induce them to return to their duty and their allegiance. Impress upon them the desire of the Government and their fellow-citizens for a return of those peaceful relations which once existed, and which ought never to have been interrupted. Your acts and words, on all occasions, you will make correspond with these declarations.

The military force, which, under the direction of the Secretary of War, accompanies the naval expedition, will coöperate with you for the purpose of taking possession and holding, as stated, at least two of the places that have been enumerated, and, in concert with you, taking other measures for maintaining the national authority and enforcing the execution of the laws.

By a recent order of the President, a copy of which has been forwarded to you, flag-officers rank as major-generals; but no officer of the Army or Navy, whatever may be his rank, can assume any direct command, independent of consent, over an officer of the other service, excepting only when land forces are expressly embarked in vessels-of-war to do the duty of marines.

The President expects and requires, however, the most cordial and effectual coöperation between the officers of the two services, in taking possession of and holding the posts and positions on our Southern coast, which are designated in these instructions, and will hold any commander of either branch to a strict responsibility for any failure to procure harmony and secure the objects proposed.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Flag-Officer S. F. Du Pont,

Commanding South Atlantic Blockading Squadron, etc.,

NAVY DEPARTMENT, January 23, 1862.

SIR: The importance of a rigorous blockade at every point under your command cannot be too strongly impressed or felt. By cutting off all communication, we not only cripple and distress the States in insurrection, but by an effective blockade we destroy any excuse or pretext on the part of foreign governments to aid and relieve those who are waging war upon the Government.

There is a manifest desire, if not determination, in certain quarters, to break the blockade, and the apology therefor will be, if possible, a want of vigilance or efficiency on the part of our squadrons in guarding the coast in such a manner as to interdict communication. While confiding to your practical knowledge and judgment the disposition of the vessels committed to you, I have felt it my duty to warn you of the difficulty alluded to, and at the same time to suggest that, except when required by pressing necessity, there should not be a concentration of vessels at any given point, but that they should be spread so as to make the blockade effective throughout the whole extent of coast under your supervision. Most of the important posts are well guarded, though occasionally we hear that a vessel has run the blockade in bad weather or in darkness, or at points least likely to attract attention. Every case of this kind, I have reason to believe, is noted and laid up as evidence that the blockade is not effective, and therefore is to be disregarded by those governments whose subjects may become clamorous for supplies from the States blockaded.

The Department is aware of the difficulties you are compelled to encounter; it has been gratified with the ability and resources which you have brought into requisition to carry out the policy of the Government; and I wish in this communication, warning you of what may be apprehended from foreign interference, provided there is any want of vigilance or effectiveness in any quarter in keeping up a rigid blockade, to express my commendation, and also my confidence that you will, even in this stormy season, with such force as is at your disposition, interdict communication at every point, and thus destroy any pretence for breaking or attempting to break the blockade.

As fast as we can augment our force or spare vessels from other points, we shall endeavor to reinforce your command; in the mean time our reliance must be on your own powers and capability in the squadron that you have.

I am, respectfully, etc.,

GIDEON WELLES.

Flag-Officer WM. W. McKEAN,

Commanding Gulf Squadron, etc., etc., and others.

[CIRCULAR LETTER.]

NAVY DEPARTMENT, August 18, 1862.

SIR: Some recent occurrences in the capture of vessels, and matters pertaining to the blockade, render it necessary that there should be a recapitulation of the instructions heretofore from time to time given, and also of the restrictions and precautions to be observed by our squadrons and cruisers.

It is essential, in the remarkable contest now waging, that we should exercise great forbearance with great firmness, and manifest to the world that it is the intention of our Government, while asserting and maintaining our own rights, to respect and scrupulously regard the rights of others. It is in this view that the following instructions are explicitly given:

First. That you will exercise constant vigilance to prevent supplies of arms, munitions, and contraband of war from being conveyed to the insurgents; but that under no circumstances will you seize any vessel within the waters of a friendly nation.

Secondly. That, while diligently exercising the right of visitation on all suspected vessels, you are in no case authorized to chase and fire at a foreign vessel without showing your colors and giving her the customary preliminary notice of a desire to speak and visit her.

Thirdly. That, when that visit is made, the vessel is not then to be seized without a search carefully made so far as to render it reasonable to believe that she is engaged in carrying contraband of war for or to the insurgents and to their ports, directly or indirectly by transshipment, or otherwise violating the blockade; and that, if after visitation and search, it shall appear to your satisfaction that she is, in good faith and without contraband, actually bound and passing from one friendly or so-called neutral port to another, and not bound or proceeding to or from a port in the possession of the insurgents, then she cannot be lawfully seized.

Fourthly. That, to avoid difficulty and error in relation to papers which strictly belong to the captured vessel, and mails that are carried, or parcels under official seals, you will, in the words of the law, "preserve all the papers and writings found on board, and transmit the whole of the originals unmutated to the judge of the district to which such prize is ordered to proceed;" but official seals, or locks, or fastenings of foreign authorities, are in no case, nor on any pretext, to be broken, or parcels covered by them read by any naval authorities; but all bags or other things covering such parcels, and duly sealed or fastened by foreign authorities, will be, in the discretion of the United States officer to whom they may come, delivered to the consul, com-

manding naval officer, or legation of the foreign government, to be opened, upon the understanding that whatever is contraband or important as evidence concerning the character of a captured vessel, will be remitted to the prize court or to the Secretary of State at Washington; or such sealed bags or parcels may be at once forwarded to this Department, to the end that the proper authorities of the foreign government may receive the same without delay.

You are specially informed that the fact that a suspicious vessel has been indicated to you as cruising in any limit which has been prescribed by this Department, does not in way authorize you to depart from the practice of the rules of visitation, search, and capture prescribed by the laws of nations.

Very respectfully,

GIDEON WELLES, *Secretary of the Navy.*

Rear-Admiral D. G. FARRAGUT,

Commanding Gulf Squadron, Ship Island, and others.

NAVY DEPARTMENT, *April 12, 1862.*

SIR: It is of the greatest importance that the exportation of anthracite coal from ports of the United States to any and all foreign ports should be absolutely prohibited.

The rebels obtain the coal for their steamers from Nassau and Havana, and the fact that it burns without smoke enables them to approach blockaded ports with greater security, as all other coals throw out so much smoke as to render their presence visible a great distance at sea.

I am, most truly, sir, your obedient servant,

GIDEON WELLES.

The President of the United States.

NAVY DEPARTMENT, *April 26, 1862.*

SIR: I have the honor to acknowledge the receipt of your letter of the 24th instant, enclosing a copy of a note of the 19th instant, addressed to you by the chargé d'affaires of Denmark, who asks if the Danish harbor of St. Thomas, in the West Indies, cannot be exempted from the operation of the order prohibiting the exportation of anthracite coal to foreign countries. The friendly feeling of the Danish Government is felt and appreciated, and there can be no other than reciprocal kind feelings on our part in return. I do not doubt that it would be the disposition of the Danish authorities to prevent an abuse of the privilege if an exception were made in their case, but on the other hand I am not aware they could prevent it. Unless we can be permitted to

seize the rebel steamers which may resort to St. Thomas for coal and other purposes, our true course is to prohibit it, and to treat that portion of the Danish dominions as we treat the rest of the world. If they will make themselves an exception, and allow us a privilege which others do not allow us, then I would most cordially reciprocate the act, and extend to them a privilege that is denied to others.

Until St. Thomas stands in different relations to us from other parts of the world, in the treatment of the rebels, I do not see how we can favor them beyond others.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Hon. WM. H. SEWARD, Secretary of State.

NAVY DEPARTMENT, May 27, 1862.

SIR: I have the honor to acknowledge the receipt of your letter of the 22d instant, enclosing a copy of a reply from the Secretary of the Treasury, to whom you referred a communication of this Department on the subject of permitting residents of certain counties in Virginia to carry their grain to market.

You state that you do not perceive any objection to granting the privilege asked, upon the conditions mentioned in the letter of the Secretary of the Treasury.

The Department would remark that authority to traffic, sell or buy, within the region blockaded, is inconsistent with the blockade itself. All special permits must be attended with difficulty by whatever power granted. If trade or traffic is open to one, it should be open to all. In other words, the blockade must continue to be enforced, modified, or abandoned. In either case it should be a matter of governmental policy, in which all should be allowed to participate.

I know not that there is any objection to exempting the counties in Virginia where we have military possession from a further enforcement of the blockade. On the contrary, it appears to me that if the inhabitants are passive, or not actually disloyal, that commerce, trade, and free intercourse will promote friendly feelings.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Hon. WM. H. SEWARD, Secretary of State.

During the whole period of Mr. Welles's administration the Department labored most earnestly to impress upon the country and upon Congress the importance of creating and maintaining

a Navy inferior to no other, as our only security against a foreign war. In these efforts the Secretary was most cordially supported by his associates in the Department. The first approach of real danger from abroad will not fail to justify every demand which the Secretary made upon the country for enlarged facilities for building and maintaining a formidable navy. It will certainly be seen, at no remote period, that these earnest admonitions originated in true statesmanship, and that the economy which was so strongly urged against spacious navy-yards, dock-yards, and machine-shops is only wastefulness in disguise. For when a great emergency comes suddenly upon a nation unprepared, then every munition of war, if obtainable at all, can be procured only by paying the greatest prices for the poorest quality. Steam has brought America within the field of European movement; and if her power, especially upon the sea, is less than that of the mightiest, she will be trodden down.

NAVY DEPARTMENT, *June 9, 1862.*

SIR: I had the honor to address the Naval Committee, under date of the 25th March last, on the subject of armored ships, and the necessity of preliminary measures in the future construction of vessels for the naval service. The fact that a radical change has commenced in the construction and armament of ships, which change in effect dispenses with the navies that have hitherto existed, is obvious, and it is a question for Congress to decide whether the Government will promptly take the initiatory step to place our country in the front rank of maritime powers.

It is unnecessary that I should recapitulate the suggestions contained in my letter of the 25th of March, but I would again call your attention to them, and state my earnest desire that Congress should take action before its adjournment on the subject, not only of supplying itself with the armature and heavy ordnance for ships, but the substitution by the Government of iron for wood, in whole or in part, in the construction of naval vessels. It has hitherto been supposed to be the true interest of the Government to build its own ships-of-war, and to manufacture the arms and most of the articles which are requisite for the naval service. This necessity has arisen chiefly from the fact that naval vessels and naval purposes and objects are in many respects so essentially different from those of the mercantile marine, as to place them out of the usual line of private enterprise. The Government has, consequently, to pay an extra cost for extra and better work. In naval and military mat-

ters it is indispensable that vessels, guns, machinery, and every thing pertaining to them should be of the best quality, reliable, and always ready at any moment to meet the public necessities.

The Government has several large navy-yards for building ships, and the introduction of steam, which is necessary for and made applicable to all naval vessels now constructed, has compelled it to erect extensive shops for making steam machinery. But these shops are inadequate to the wants of the Navy, and for some years it will be necessary, under any circumstances, to contract for much the larger portion of the work that will be required.

It is now generally conceded that vessels for fighting purposes must be heavily plated with iron, if they are not built entirely of that material. In this, as in most costly fabrics, economy is reached through durability. Iron ship-building is new in this country. But few persons are engaged in it, and it is a novelty in our navy-yards. Heavy iron beams, shafting, and thick iron plates can be procured from only two or three parties, and then in limited quantities, and subject to great delay. Individuals have little use for iron of such magnitude as the Navy must have, and there must unavoidably be great outlay to prepare for the execution of such work. With only the Navy for a purchaser, there can be no competition; and the Government will be compelled, under such circumstances, to pay almost any price the mills and forges may demand. No inconsiderable portions of an iron ship can be made and procured at the ordinary mills, and so far as it can be done, it may be the best policy to be so supplied; but the heavy and expensive portions cannot be so procured, and unless the Government is prepared to execute the work, it will be subject to imposition, and its vessels to marked inferiority.

Other nations, whose wooden ships-of-war far exceed our own in number, cannot afford to lay them aside, but are compelled to plate them with iron at very heavy cost. They are not unaware of the disadvantage of this proceeding, but it is a present necessity. It must be borne in mind, however, that those governments which are striving for naval supremacy are sparing no expense to strengthen themselves by building iron vessels, and already their dock-yards are undergoing the necessary preparation for this change in naval architecture, notwithstanding those governments have at their command the greatest experience and the most extensive and complete iron and machine factories that private enterprise can produce. These facts are suggestive to our Government, and I desire to call your attention to the necessity of making the necessary provision for ourselves by providing the means

and conveniences for building and repairing a Navy, such as the strength and character of our Government and country require, in order to maintain its true position among maritime powers.

We have been engaged for years, and have spent millions in our navy-yards and on our steam machine-shops for ship-building purposes, and yet have not been able to keep up with the wants of the Navy and the exigencies of the service.

It is not the part of wisdom to close our eyes to the progress of events, nor to evade the responsibilities that properly belong to us. The creation of a new and different Navy, such as the development of science and art already demonstrate as a necessity, calls for vigorous measures and prompt and energetic action. The Government should not, in justice to itself, be dependent on private establishments for its most important and expensive works, but should rely upon itself. Great works, however, require time in their preparations, and lavish expenditures cannot hasten them. Congress has been liberal in its appropriations for building vessels, but these appropriations cannot be made available in obtaining the proper locations, and mills, forges, furnaces, and shops, all of which are requisite, and, which to be secured properly, need time and careful consideration.

If the money for these purposes be now appropriated, we shall commence, under as favorable circumstances as any nation, the construction of a Navy adapted to the wants of our country and the times. No nation can have an advantage over us if we avail ourselves of our means and opportunities, and it is no longer doubtful that our future safety and welfare are dependent on our naval strength and efficiency. It is a duty as well as a necessity that we make these United States a great naval power. We owe it to ourselves to commence this work at once, and the present Congress should, in my opinion, take the preliminary steps for laying the foundation for the construction of a Navy commensurate with the wants and magnitude of the country. The place or places, and shops and tools and other appurtenances for this great work, must be provided in season. The experience we have had admonishes us not to permit a war to come upon us unprepared, yet such an event may be pending, and the responsibilities and calamities that would follow neglect should be a warning for us to be prepared. No amount of money would repair the wrong that might be inflicted from present neglect. A million or two of dollars judiciously expended at the present time may save hundreds of millions and the honor of the nation after hostilities shall have commenced.

I have made these suggestions in consequence of the near termina-

tion of the session, without any movement as yet for establishing the necessary works to produce the heavy iron and armature that will hereafter enter into the construction of our naval vessels. It is doubtful whether either of our present navy-yards is best adapted to the purpose herein indicated; but if so, they will require considerable enlargement. The subject is one that should receive careful consideration, and I would suggest that authority be given to designate and procure one or more suitable locations. We are now constructing a number of gunboats by contract on the Western waters, and I would suggest that recent experience and the vast resources in iron and other capabilities of the West, with the radical change in naval architecture, demonstrate the propriety of establishing a navy-yard, foundery, and shops, at some point in the valley of the Mississippi. Such a yard and its attendant establishments would possess many advantages, and is becoming a necessity. I commend it to your attention, with the other subjects alluded to in this communication.

I have the honor to be, very respectfully, etc.,

GIDEON WELLES.

Hon. JOHN P. HALE,

Chairman Naval Committee, U. S. Senate.

In December, 1864, Congress had failed to respond according to the wish of the Secretary, and he returned to the subject again in his report, in the following manner:

The introduction of steam as a motive power for naval vessels is causing a revolution in maritime warfare which the ablest minds have long predicted would be the result of this agency, but which is not yet to its fullest extent appreciated. It changes the whole character of blockade, and in future wars it will be found that a few fast privateers by steam will harass or annihilate the commerce of the most powerful belligerent nations.

Our country has been compelled by this civil war to take the initiative in organizing a vast steam navy with which to establish and enforce the blockade of our whole coast from the Chesapeake Bay to the Rio Grande; and also to suppress the depredations of semi-piratical privateers, built by skilled English mechanics in English ship-yards, and manned by Englishmen, which, under the rebel flag, have roved the ocean, destroying our merchant shipping, and have found refuge and supplies in English and neutral ports.

When hostilities commenced, our Government had provided no suita-

ble navy-yard with machine-shops and founderies to manufacture the necessary machinery for our rapidly increasing and expanding Navy ; but the Department was compelled to rely on the few private establishments, which it could divert from other engagements, for the immense work that was calling out the resources of the nation.

Great embarrassment was experienced in consequence of this neglect of the Government at the very commencement of the war ; and although the naval service and the country are suffering constantly from this neglect, measures for the establishment of a suitable navy-yard for the construction and repair of iron vessels, their armature and steam machinery, are still delayed.

As early as March, 1862, and on several occasions since, I have had the honor to present my views to Congress on this subject. The earnestness and frequency with which it has been brought forward must find an apology in its great importance.

It has never been the purpose of the Department, in any of its suggestions or recommendations, to increase the number of our navy-yards, nor to alter their local distribution. The yard which we now have at Philadelphia, is altogether inadequate to our present or future wants. It was proposed, therefore, to substitute a new one on the Delaware, in the vicinity of Philadelphia. League Island, within the limits of that city, if adopted as a site, must gradually absorb the works at the present yard, which would then be discontinued.

All of our present navy-yards, it will be remembered, were established for the construction and repair of wooden sailing vessels. Steam and armored vessels have superseded these, and the inability of our present establishments for the work imposed by this war has been the source of inexpressible anxiety, and often of great disappointment and public injury. To relieve the navy-yards from work which they have but limited means to execute, and to secure necessary repairs, the Department has been compelled to establish stations for machinery and means of refitment at Mound City, Memphis, New Orleans, Ship Island, Pensacola, Key West, Port Royal, Beaufort, Norfolk, and Baltimore. But these and all the private establishments of the country, besides other calls upon them, have been insufficient to keep the present Navy in necessary order ; so that, if to the duty of blockading there were added ocean conflicts with a naval power by which our ships would be often disabled, the sad spectacle would be presented of our naval vessels laid up in time of war for want of a proper establishment with the shops and means to repair them.

Our country, whose strength and power among nations must ever be

identified with and maintained by its Navy, and which possesses in such abundance the means of creating and sustaining one, has not, in all the navy-yards combined, the appliances possessed by single establishments in England and France. Were there outside of our navy-yards establishments to perform promptly the requisite work in time of war, I should not at this time again press the subject of a navy-yard for iron-work for the construction of vessels upon the consideration of our authorities. But although the Department has generally been ably and zealously seconded in its efforts by private contractors, yet the fact that there is no customer but the Government for much of this heavy class of iron-work, forbids us to expect that individual enterprise will be prepared to execute it without full remuneration for all the outlay for shops, tools, and machinery which may be required in preparation. Besides this, unlimited time is taken by them for the completion of the work. It may be proper to mention, as an instance of the delay to which the Government is subjected, that in October, 1862, contracts were made with a manufacturer of reputation and ability for making and setting up the turrets of the *Tonawanda* and *Miantonomoh*, which were to have been completed in February, 1863, but they will probably not be finished until February, 1865, two years after the expiration of the time specified in the contract. At the commencement of hostilities this Department had equipped, and at its immediate disposal, three vessels-of-war. Those which were laid up, and those which were recalled from abroad, had to undergo extensive repairs, for which no provision had been made. The Government has not even at this time an establishment where a shaft can be made for our steamers or a plate for our iron-clads. The frontage or wharfage at all our navy-yards, so important for repairs, is less than is required at each of them.

Our next contest may be with a naval power which will attempt to direct upon our shores a course of operations similar to those which we have applied to the Southern coast for suppressing the rebellion. One yard, at least, where iron vessels, iron armor, and iron shafting can be manufactured, is now imperatively necessary. Among the considerations that should control the selection of a site for such a yard and establishment, which shall become the depot for the materials collected in years of peace with which to build and repair our naval vessels, and where will be aggregated machinery and tools such as at present are not to be found in this country, and which, when once procured, could not, if destroyed, be easily or readily replaced, will be its absolute safety from attack by sea or land. So far as is possible, we should avail ourselves of natural advantages in obtaining the indispensable security for such an

establishment, without depending entirely on fortifications and artificial means, which would be more costly than the navy-yard itself.

The additional military defences of Portsmouth, England, rendered necessary by the proximity of that great naval station to the ocean, and its consequent assailability by modern ordnance, are now being constructed at an expense of \$50,000,000.

These letters and extracts have been introduced not only to illustrate the character of the Secretary, but to set forth the policy which was adopted by the Department, and which was steadily adhered to until the close of the war. The exhibition, however, is necessarily a partial one, and much additional light will be shed over the whole subject in the progress of the narrative. The following brief summary of his work, submitted in December, 1864, when nothing important remained to be done, except the capture of Fort Fisher, accomplished soon after, and the cordial and graceful acknowledgment of his obligations to his associates, may very properly close this notice of one whose fame will increase in proportion as the administration of his Department is understood by the people. He and his associates may trust with perfect confidence the impartial judgment of the future. They will stand on the page of history as having conducted triumphantly the grandest naval operations which the world thus far has seen; as having accomplished, both in the blockade and in battle with forts, what Europe declared could not be done, and as having inaugurated a new era in naval war:

In this, my fourth annual report, I have submitted somewhat in detail the condition of the Department and the service. This report presents the distribution and employment of a maritime force which, including the additions to it now in progress and near completion, constitutes for all the purposes of defence, if not of attack and conquest, the most powerful national navy in the world. In four preceding similar communications, including that submitted to you upon the assembling of Congress in the extra session of 1861, it has been my duty to exhibit the methods and measures of administration, by which, from a comparatively small beginning, and under the pressure of an unexampled exigency, this vast naval power has, since your accession to the Presidency, been brought into existence; to state the contributions which have been made to it from our commercial marine; to indicate the application of all the resources of our public naval establishments to its construction and prep-

aration for service; to show how individual energy and skill and capital have come successfully in aid of insufficient governmental provision for the due prosecution of the work, and to trace in general outline the processes and results of inventive genius and scientific experiment which have changed, to a great extent, the materials and forms of naval structure and armor and armament, and have enabled our country, while in so brief a period assuming a foremost place among maritime nations, to create also a new era in the development and application of naval force.

In connection with such account of the sudden creation of a new American naval power, it has been at the same time my privilege in these communications to make official record of a series of naval enterprises and achievements wholly without precedent or parallel. No previous conception of efficient blockade; no former endurance under the fire of fortified batteries; no audacity and success heretofore known of naval attack upon such fortresses, through formidable submarine obstructions spread for their defence; no similar penetration by war-vessels of internal waters through a reach of navigation almost continental; no other gigantic scale of coöperation of naval with army forces in expeditions and combats hundreds of miles from the seaboard, and along the course of rivers precarious and dangerous of navigation, can anywhere be found of a character to compare with the triumphs in all these forms of naval effort which it has been the duty of this Department during the past three years to organize and to report.

If in the prosecution of duties so arduous, complicated, and exacting, the trust confided to this Department shall appear to have been faithfully and fitly discharged, then certainly my acknowledgments are still due, as they have been heretofore expressed, to the gentlemen associated with me in its management, to the whole clerical force, to the several chiefs of bureaus, and especially to the invaluable services of the Assistant Secretary and the Chief Clerk of the Department.

But it is to the officers and men of our naval service that the great renown of what has thus been done, and is doing, justly belongs. The best administration of this Department can do little more at any time than to give them the adequate means and the right opportunity of action. To them, therefore, first and always, be the honor, when their own country and the world shall recognize in this expansion and these exploits of our naval power a spectacle of patriotic and virtuous heroism worthy of the cause in which it is displayed, and of the national life which it illustrates and defends.

GIDEON WELLES,

Secretary of the Navy.

To the President.

CHAPTER III.

THE OFFICE OF THE ASSISTANT SECRETARY.—THE MENTAL FORCE
STORED WITH THE PEOPLE, AND EVER READY FOR USE.—THE
MIANTONOMOH'S VISIT TO EUROPE.

MR. LINCOLN, emerging from poverty and obscurity, and ascending to the highest position, drew after him a large number, who, like himself, started from among the ranks of the laboring people, and proved themselves capable of filling and honoring the highest station, without the education of the schools.

This suggests two facts, which have an important bearing upon the future of our country. We have exhaustless resources of mental power treasured up with the people, ready to be brought forth and disciplined for use, in such measure as the nation may require.

Thanks to our free institutions, the masses of this country are already so far lifted above the brutalizing effects of inferiority and toil, that the mental powers are not crushed or dwarfed; and it is found in our common schools and higher seminaries that the children of the laboring poor are quite as likely to exhibit intellectual force and capacity as those of the wealthy. This would not be true, as the general rule, in the first generation, at least, of the children of the laborers of England or Ireland, or even of our own freedmen; and hence it is, that we have generated here a thinking force, a brain-power, through free institutions and education, far in advance of what the nations of Europe can now command. We are far ahead of them, and we shall maintain the advance position, if we preserve the rate of progress. We are already a nation of thinkers.

• As the motive power of a steam-engine is estimated by horse-

power, so the fighting force of a nation will hereafter be calculated by its brain-power; and as that depends upon the number of educated minds, it is easy to see that a country of universal freedom and universal education will have, in the future, an overwhelming advantage over one where the masses are degraded and ignorant. Battles are to be fought, not by muscles, but by brains. Labor-saving and time-saving machinery will be used in war as successfully as elsewhere. A single shot, fired by one man handling his gun by steam, will sink a ship that once hours of cannonading by a hundred guns, worked by a thousand men, could scarcely accomplish. The Americans have just entered upon this new field of invention. Labor-saving slaughtering-machines, and Monitors, and twenty-inch guns, and torpedoes, are impressive indicators of what they may accomplish hereafter.

Hence the importance of the fact that such a reserve force of mental power is stored up among the people, ready for use whenever the country has need. Another important fact is, that men thus called out from the people, the working class, are often found capable of the noblest achievements without the previous training even of the schools devoted to their professions. This certainly is no reason why the officers of the Army and Navy should not receive a finished education, but it suggests the question whether it is not true, that sometimes, in a critical moment, officers are restrained by theories from attempting what a bold man, unacquainted with all the possible scientific difficulties, might not only attempt, but perform.

It is known that some of the best-educated officers of the English and French service declared it impossible to capture New Orleans; and it is nearly certain that such men would have declined to make the attack, on the ground that theoretically and scientifically considered, success was impossible. Yet, according to Farragut's higher theory of dash and pluck, it was possible; and practical common sense and courage were found to be wiser than the formulas of the schools. It is said that one gallant old French admiral remained angry with Farragut till the end of his life, because the Yankee admiral took the forts when it was scientifically impossible!

In like manner, it is said, military science declared Fort

Fisher impregnable; but Porter's broadsides smashed both the fort and the theory; and Terry proved that a place theoretically impregnable could be practically stormed and captured. Thus the war has demonstrated more clearly than ever before, that this country will be in advance of other nations in the means of attack and defence, so long as it has the greatest number of free, intelligent, independent thinkers. In Europe the mind works in trammels, by rules and precedents, restrained on all sides by fixed theories and customs. Here, thought travels unhindered where it will, and therefore it brings us continually fresh discoveries. It is said that Europe will soon have Monitors and 15-inch guns. Be it so. American genius has not exhausted itself. When the nations have armed themselves as we have now done, the ever-restless and ever-increasing brain-power of our thinking workers will devise some new and more effective method of warfare.

The amount of mental wealth, more valuable than that of all our mines, which popular education has created among the people, and which is held as the reserved power of the nation, is indicated by such examples as that of the Assistant Secretary of the Navy; and some facts* in his life are herewith presented

* GUSTAVUS VASA FOX was born June 13, 1821, in Saugus, Essex County, Massachusetts. His father was a country physician, in moderate circumstances, and was, therefore, unable to give his child the advantages of a classical education. He removed from Saugus to Lowell, when the son was two years old; and there young Fox received only such an education as was afforded by the common schools of that town.

In January, 1838, he was appointed a midshipman; and made his first cruise to the Mediterranean, in the Cyane, with Captain John Percival. His service at sea was mostly in time of peace; and though few incidents occurred worthy of a place in history, yet his was not altogether a fair-weather experience. He was on the *Saratoga* in that night of winter storms, when, after having passed out of the harbor of Portsmouth, she was unable either to proceed or return, and, though anchored off shore, could not furl her frozen sails. The ship could only be saved by cutting away her masts, and after great exposure and suffering of the crew. Subsequently he was in the *Independence*, a fifty-gun ship, then commanded by Commodore Stewart, when she was struck by a white squall, whose very fury may be said to have saved the vessel. Its first blast, while it laid the ship nearly on her beam-ends, tore away her head sails, and then the main yard was broken, and thus she was partly relieved from the pressure that was bearing her down. Still, as her head sails were gone, she could not be brought round before the wind, and the situation, for a few minutes, was perilous indeed, for she was thrown so far over as to be filling with water. In this emer-



J. H. H. H.
1851

in order to show that, by the almost universal education of our children, the country is preparing itself for any possible emergency.

A glance at the principal events in this brief narrative will show how well they were calculated to prepare Captain Fox for the eminent position to which he was afterward called.

The strictly professional education, whatever the profession may be, however it may tend to excellence in that special line of action, often unfits a man for wide and liberal views. The

gency the crew were sent into the fore rigging, where the wind, acting upon them as upon a sail, brought her slowly round, and she righted, and shook the waves from her as she came before the wind.

In 1844 Fox passed his examination at Philadelphia, and was appointed a passed midshipman; and made a cruise on the coast of Africa and to the West Indies in the *Preble*, with only the usual incidents belonging to such a service, though gathering an experience in these varied scenes which was to be of use in future years.

In 1846 he was attached to the coast survey, and this also helped to prepare him to judge of the important questions connected with the blockade.

1847 he joined Commodore *Berry's* squadron, in the brig *Washington*, and participated in the operations of that squadron against the Mexican coast and ports. Then for the first time he learned, though on a small scale, something of the operations of actual naval war. In comparison with what has been since done, those things appear very insignificant now. In 1848 he went out to the coast of Brazil and to the East Indies as acting master of the *Plymouth*; and in 1850 he joined the *Dolphin* as executive officer, and visited the islands of the Pacific, California, and the west coast of South America, and returned by Cape Horn.

In 1851 he was appointed master, and in 1851 and 1852 was on board the mail-steamer *Baltic* as chief executive officer, running between New York and Liverpool. In December, 1852, he was commissioned as lieutenant, and ordered to the *Princeton*, which was the flag-ship of the fishing squadron under Commodore *Shubrick*. In August, 1853, he was detached and ordered to command the mail-steamer *Ohio*, running between New York and *Aspinwall*. 1854 he was transferred to the command of the new mail-steamer *George Law*. In 1855 he was detached and granted one year's furlough. In July, 1856, he resigned, having been appointed agent of the Bay State Mills, at Lawrence, Massachusetts.

In this school Captain Fox was trained until the breaking out of the rebellion, when his spirit was so stirred, that he was impelled to seek for some active service in his country's cause; and was soon pointed out to Mr. Lincoln to lead the expedition for the relief of Fort Sumter, a detailed account of which appears in another part of this volume.

In May, 1861, after his return from the attempt to relieve Fort Sumter, Captain Fox was appointed Assistant Secretary of the Navy, and entered upon the discharge of those important duties in which, by cordial coöperation with the Secretary, and by suggestions which his own previous experience enabled him to make, he contributed largely to the success of the Union cause.

merely professional man is quite likely to view the whole world from one stand-point, and in one set of relations only. This is far from being a reproach to professional men ; for if a man would perfect himself in any particular branch of study or business, it is really necessary that he should devote himself particularly to that in which he would excel. A general education forbids that special attention to any one subject by which alone distinction is attained. Necessarily, however, confining the mind to one sphere of action, causes this to assume an undue importance in relation to other matters ; and one who feels conscious that he has mastered the branch to which he has devoted himself, is very reluctant to receive suggestions from other quarters, or to believe that any other person could discover any thing in his field that had escaped his own notice.

Hence the extreme difficulty with which professional men can be induced to regard with favor, much less adopt, an improvement, however valuable, which has been suggested by one outside of their own professional circle. It is probable that no class of men are more likely to be moulded by the peculiarities of their profession than the officers of the Navy. Confined to a great extent to their ships, often cut off for weeks and even months from all direct intercourse with the world on shore, they become of course very much absorbed in their special occupation, and lose somewhat their interest in the general movements of society. This is well for the country, because thus its flag on the sea is committed to those who have made its defence their special study.

But if an officer of the Navy, or of the Army, were to be called to administer affairs in a position demanding, not merely professional skill, but general knowledge of public interests, then, though perfectly competent to command fleets or armies, it would be necessary that his mind should expand beyond his special sphere ; and to study public matters, not merely from the stand-point of the soldier or sailor, but from the position of the statesman.

The long service of Captain Fox in the Navy was quite sufficient to make him a thorough seaman, to bring him into association with its officers, and to identify him with its interests. At the same time, an important part of this service, that in

which he commanded the mail and passenger steamers to Liverpool and Aspinwall, brought him into intimate connection with the two great currents of American travel, the European and the Californian; and thus to the experience of the seaman was added that liberalizing knowledge which is derived both from society and travel. It gave to his mind a very different culture from that obtained on a vessel-of-war, and fitted him to occupy a wider sphere.

His resignation of his place in the Navy, and the acceptance of the position of agent of one of the great manufacturing establishments of Lawrence, introduced him to an entirely new scene, and a new class of duties. As this position demands business capacity and executive power of the highest order, it shows the estimate which keen-sighted business men then put upon his character. To conduct successfully the operations of one of these immense establishments requires important qualifications in addition to those which form a skilful commander of a ship; and unless the owners of these mills had believed that Captain Fox possessed these, the vast interests of the company would never have been confided to his care. They are able to command the best administrative and business talent of the country; and to be selected for this post is a very weighty testimony to the ability of any man.

Here a new class of interests was brought before him, and the world was viewed from still another point of view. He had already an experience, gathered in almost every quarter of the globe, and from all classes of society, and finally a lesson was learned in one of those great establishments which are the joint production of capital, skill, inventive genius of the highest order, and well-rewarded labor.

Here the wonderful results of machinery were constantly under his eye—effects so marvellous, that a great factory, with its cunning engines all in motion, and doing with such celerity and certainty all their various work, seems as if itself were intelligent; as if wheels and spindles and looms, shafts, belts, and pulleys were only the limbs of one immense and curious body, animated by a directing soul. Such a scene, where almost daily some new device for saving labor or time, or for obtaining greater results was brought forward, by the restless spirit of in-

vention, would be very likely to bring any thoughtful man to the conclusion that the old and beaten track might often be abandoned for a new and better way.

A man who becomes acquainted with the progress of machinery, both here and in Europe, will, unless he is a stereotyped man, soon learn to expect that present methods, however excellent they may seem, and however time-honored they may be, are quite likely to be superseded by some far better and perhaps unexpected contrivance.

The salient points of the Assistant Secretary's character are easily described. His views of affairs are of the most comprehensive character, and no one has seen more clearly than he the necessity of creating and maintaining an American Navy strong enough to protect us against Western Europe ; and he has ably seconded the earnest and enlightened efforts of the Secretary to awaken the country to a proper sense both of its need and of dangers which lie in the not remote future. He has executive ability of a high order, and promptness, energy, and decision mark all his operations.

But that trait which has attracted more attention than any other, is the boldness of his conceptions in regard to new methods of naval war, and the courage with which he has defended and helped to introduce those inventions which, at first distrusted and sneered at, have compelled now the attention and respect of the world. He gave an earnest support to the Secretary in introducing the Monitor, and this support was the more valuable because the experiment was opposed by experienced officers and constructors. To him also belongs much of the credit of bringing into use the 15-inch gun, without which the Monitors would lose very much of their importance. In fact, if the two inventions were to be viewed and estimated separately, it would be deemed by many that the new ordnance is likely to exert a more decided influence upon the future than the armored ship. The 20-inch gun may demonstrate that armor of any thickness or of any description is a vain defence against the guns of the future.

Perhaps there was no measure adopted by the Navy Department during the war which more truly expressed the sagacity and boldness of the American mind than the laying down at

once a fleet of ocean cruisers of the Ammonoosuck class. So soon as the real spirit and intentions of England were fully disclosed in the affair of the Trent, it was determined to prepare to meet our neutral enemy abroad as well as at home, and be ready to kindle a flame which would burn before her own doors as brightly as along our coasts. About thirty steamers were immediately put upon the stocks, whose speed and power would be sufficient to sweep the commerce of England from the seas, and able also to levy contributions, should it be deemed proper, from any spot whose protections are not of the most formidable character. The construction of these immense steamers went rapidly forward, and at the close of the war England found herself confronted by ships nearly ready for service, to which she had nothing to oppose, and which excited a well-founded alarm.

This will appear by the following extracts from a letter addressed to the Duke of Somerset, by Captain William Horton, of the Royal Navy, and from a lecture by the same gentleman, January 15, 1865: "But I have more particularly been led to consider the quality and equipment of the ships which have latterly been constructed in America, and which are eminently calculated to cut up and destroy our commerce in event of hostilities. The floating wealth of this country, incalculable in its value, could not, with the naval resources we now possess, be protected in any degree against the depredations of such cruisers as now form a prominent feature in the Navy of the United States. Before the war was at end, it was determined to establish a class of vessels for foreign service possessing great speed, and carrying heavy guns, while if they at all approach the idea upon which they were designed, will have it in their power so long as they continue unopposed by more numerous ships of a superior, or at least of equal speed and armament, effectually to sweep the seas of any commerce against which they may be launched. Such ships will be fit to fight on favorable terms when the occasion may arise, and able to flee beyond possibility of capture from any description of vessels now existing elsewhere, and which might happen to carry a superior armament or thicker sides." England has thus been compelled to admit that she is overmatched upon the seas by our unarmed cruisers,

and that administration of the Navy Department, which has thus suddenly surpassed England both in iron-clad and wooden ships, merits the gratitude of the country. It detracts nothing from the high reputation which the Secretary has nobly earned, to state that his Assistant contributed largely to the influence by which not only the Monitors and guns of large calibre were adopted, but also those new ocean cruisers which have so suddenly startled Europe, and shown them, scarcely less than by our iron-clads, that the United States would be a very dangerous enemy.

In the spring of 1866 Captain Fox having finished, as he thought, the work which the war had imposed upon him, and thinking that his services were no longer specially needed by the Government, proposed to avail himself of an offer which, while it opened to him a wide field of usefulness, would give him a much larger pecuniary reward than could be derived from any official position in the Government. But before his resignation was formally tendered, a proposition was made to send one of our Monitors to Europe, and he sailed in her, having been selected to bear a letter from Congress to the Emperor of Russia. It seemed peculiarly fitting that he should accept this position. He had advocated earnestly, while yet an untried experiment, the Monitor iron-clad; he had declared that a properly constructed Monitor would not only be safe at sea, but would be easier in her movements than a broadside ship; and when the opportunity was presented he showed that his confidence in what he had advocated, would lead him to embark in the first Monitor that attempted to cross the Atlantic.

The enemies of Ericsson's invention, and those who ever associated Captain Fox's name with the Monitors, as the man in their judgment responsible for their introduction, rejoiced and sneered when it was announced that he was to go to Europe in the *Miantonomoh*, and said it was eminently fitting that the man who had introduced these "iron coffins" into the Navy, should himself be buried in one of them at the bottom of the ocean.

When the performance of the *Monadnock*, reported from time to time from points where she touched on her voyage to

San Francisco, made it probable that the *Miantonomoh* might refuse to sink for the gratification of these men, they endeavored to escape sinking themselves by declaring that Mr. Ericsson and his friends had abandoned the Monitor form of ship, and were deluding the public by a very different vessel under the old name. The overhang, it was said, was abandoned, and that was the essential idea and thing in an Ericsson Monitor. It is so, only in the same sense that it was essential that all steamboats should be built just as wide, just as long, and just as high as the first one was with which Fulton started from the dock in New York; that is to say, the overhang has no necessary connection whatever with a Monitor ship. It has nothing to do with the idea which distinguishes a Monitor from the broadside ship. The *Miantonomoh* and the *Monadnock* are as truly Monitors as the one which fought the *Merrimack*. And if hereafter some quite different forms of hull shall be invented—if the low deck and revolving turret are retained—the ship will still be a Monitor, just as the *Roanoke* is a Monitor, though a very imperfect one, because in her transformation the high sides of the broadside frigate are partially retained.

The *Miantonomoh* left St. John's on the 5th of June, and arrived at Queenstown in safety, after a passage of ten days and eighteen hours, thus settling for all time the question whether a Monitor could cross the Atlantic. But the determining of this point carried with it many others that are still more important. It was a double triumph for the inventor and the friends of this novel form of war-ship, that the *Monadnock* should have reached San Francisco at nearly the same time when the *Miantonomoh* arrived at Queenstown, the one having safely traversed both the Atlantic and the Pacific, and the other crossing the Atlantic and appearing in a European port with even less difficulty than an ordinary steamer. These two trials left little or nothing to be settled by future experiment; the one vessel in the harbor of San Francisco, and the other in Europe, were two facts which fully answered all the arguments which had been used against Monitors, and the inferences to be drawn from the performances of these American creations were at once clearly seen by all the nations of Europe.

Seldom has any greater mortification fallen upon a proud

nation than was felt by England and France when the Miantonomoh appeared in European waters. It was one of those stern but most unexpected retributions by which God so often abases human pride. Certainly a change that no human sagacity could have foreseen had been wrought in the relative positions of Europe and America between the time when the exulting cry went over England and France, "The great republican bubble has burst!" and the hour when, after the rebellion had been crushed, and the Republic, more firmly compacted than ever, it was represented in their ports by a ship which none of their own iron-clads could meet without speedy destruction, and which their fortifications could not shut out of their harbors.

The threat of sending the Warrior to Washington to chastise American pride was not far in the past, when an American iron-clad was in English waters, against which neither Warriors nor forts could have made their cities secure. When the *Times*, after the iron-clad fight in Hampton Roads, declared that wooden navies were virtually annihilated, the English people little thought that the time was so near when they would have in their own harbors, open to inspection, a ship of the United States that would convince Europe that their broadside iron-clad navies had been rendered as useless as the wooden ships had been before, and that in naval construction and naval war the European nations, Russia alone excepted, must begin anew. Especially was this seen when it was understood that such a ship as the Miantonomoh by no means exhibited the limit of power for a Monitor war-ship.

From an inspection of the Miantonomoh, intelligent Europeans could easily perceive what sort of an antagonist a Monitor like the Puritan would be with still thicker turrets and plating, with greater speed, and with her 20-inch guns, one blow from which would break the side of any broadside ship in Europe.

But it was for no mere display of national pride or power that the Navy Department ordered the Miantonomoh to Europe. The purpose was to show to the people of Europe the power of free institutions. It was to give them visible and tangible proof that the thinking force of a free republic is greater than

that of a monarchy when the masses are forced down and held down, and mind is dwarfed and uneducated. It was to aid in convincing the people that, in war as well as in peace, the simple, cheaper methods and machinery of a free population and government are more effective than the more costly and cumbersome establishments of a monarchy; that, in short, a republic is stronger as well as cheaper than the kingly throne. The visit of the *Miantonomoh*, following so closely the putting down of the rebellion, was well calculated to swell the tide of emigration from Europe, adding another important fact to the accumulating evidence that a government that could put down a conspiracy to which France and England gave their sympathies and moral and material aid, had a grand and inviting future before it, and offered a secure home to the people of all nations.

When the Assistant Secretary stepped from the deck of the *Monitor* upon the shore of Europe, and felt that the great revolution in naval construction and naval war for which some had so earnestly contended, was now virtually complete, and nothing then remained but to apply in the future facts and principles already established, he must have felt that they were rewarded in full for their labors and trials. When the *Miantonomoh* with her 15-inch guns anchored in Queenstown harbor, it was settled that the name of *Eriesson* was to represent a new era in war. Of course it was impossible to foresee what the science and inventive genius of the world might next achieve; but when it was thus decided that a *Monitor* with 15-inch turrets and 20-inch guns could become a safe and swift ocean cruiser, it demonstrated one all-important fact—that the navies of the nations, such as they then were, must speedily disappear. Machines might be invented which would shatter even *Monitors* at a blow, and this seemed even then not improbable; still the old navies were to be abandoned as nearly useless. Europe might build *Monitors* and guns equal or superior to the American; still the fact remained that their navies were virtually annihilated, and in the race for power the United States had placed itself far in advance of Europe.

The following is an extract from the first dispatch sent by Captain Fox to the Navy Department, describing the working of the *Monitor* at sea :

UNITED STATES STEAM MONITOR MIAANTONOMOH, }
QUEENSTOWN, IRELAND, *June 16, 1866.* }

SIR: The United States side-wheel steamer *Augusta* (third-rate), 1,310 tons (old measurement), Commander A. Murray, senior officer; United States Monitor iron-clad *Miantonomoh* (third-rate), 1,225 tons, Commander J. C. Beaumont; and United States side-wheel steamer *Ashuelot* (third-rate), double-ender, 786 tons, Commander J. C. Febiger, left St. John's, Newfoundland, Tuesday, June 5th, at two P. M., and the two former arrived at Queenstown, Ireland, Saturday, the 16th instant, at four P. M., after a pleasant trip across the Atlantic of ten days and eighteen hours. The *Ashuelot* kept on to Portsmouth. The material facts of the passage are placed in the form of an abstract log, attached to this letter.

There remains but one question to discuss concerning the Monitor type of iron-clads invented by Captain Ericsson: Can they be constructed so as to make them efficient fighting, sea-going cruisers? If not, then we must adopt the European models, abstain from any further attempts at progress, and content ourselves with a naval force for defensive purposes only, or invite new schemes. The facts with regard to the behavior of this vessel in a moderate gale of wind and heavy sea, when a frigate would find it impossible to use her battery, are as follows: Head to the sea, she takes over about four feet of solid water, which is broken as it sweeps along the deck, and after reaching the turret it is too much spent to prevent firing the 15-inch guns directly ahead. Broadside to the sea, either moving along or stopped, her lee guns can always be worked without difficulty; the water which passes across the deck from windward being divided by the turrets, and her extreme roll so moderate as not to press her lee guns near the water. Lying in the same position, the 15-inch guns can be fired directly astern without interference from water; and when stem to the sea, the water which comes on board is broken up in the same manner as when going head to it. In the trough of the sea her ports will be liable to be flooded, if required to use her guns to windward. This, therefore, would be the position selected by an antagonist who desired to fight a Monitor in a seaway. An ordinary vessel, high out of water, and lying in the trough of the sea broadside to, is attacked by a wave which climbs up the side, heels her to leeward, and passing underneath, assists in throwing her back to windward, when another wave is met, and the heavy lee lurch repeated. A wave advancing upon a Monitor, in a similar position, finds no side above the water to act against; it therefore climbs aboard without difficulty, heels the vessel a few degrees to windward, and passes quickly to leeward, underneath. The water which has

got on board, having no support to push it on, and an inclined deck to ascend, becomes broken water, a small portion going across the deck and off to leeward, but the largest part tumbling back to windward, overboard, without sending against the turret any thing like the quantity which first got on deck. The turret guns thus occupy a central position, where, notwithstanding the lowness of the vessel's hull, they are more easily and safely handled in a seaway than guns of the same height above the water in a broadside vessel. The axis of the bore of the 15-inch guns of this vessel is six and a half feet above the water, and the extreme lurch observed, when lying broadside to a heavy sea and moderate gale, was seven degrees to windward and four degrees to leeward, mean five and one-half degrees, while the average roll at the same time of the *Augusta*—a remarkably steady ship—was eighteen degrees, and the *Ashuelot* twenty-five degrees, both vessels being steadied by sail. A vessel which attacks a Monitor in a seaway must approach very close to have any chance of hitting such a low hull, and even then the Monitor is half the time covered up by three or four feet of water, protecting herself and disturbing her opponent's fire. From these facts, not unknown to Monitor men, and the experience we have derived from the use of such vessels during the war, we may safely conclude that the Monitor type of iron-clads is superior to the broadside, not only for fighting purposes at sea, but also for cruising. A properly constructed Monitor, possessing all the requirements of a cruiser, ought to have but one turret, armed with not less than 20-inch guns, two independent propellers, the usual proportion of sail, and constructed of iron. The comforts of this Monitor to the officers and men are superior to those of any other class of vessels in the Navy, arising chiefly from her steadiness, ample accommodations, artificial ventilation, and the great quantity of light afforded by having the bull's-eye overhead instead of at the side. The commander and lieutenant-commander, and several of the officers, are old Monitor men, and acquired confidence in this form of vessel off Charleston; nevertheless the officers and men deserve to share with their comrades in the Pacific the credit which attaches to extending the voyages of ships embracing so many novelties.

I have the honor to be, with great respect, your obedient servant,

G. V. Fox,

Assistant Secretary of the Navy.

Hon. GIDEON WELLES,

Secretary of the Navy, Washington, D. C.

CHAPTER IV.

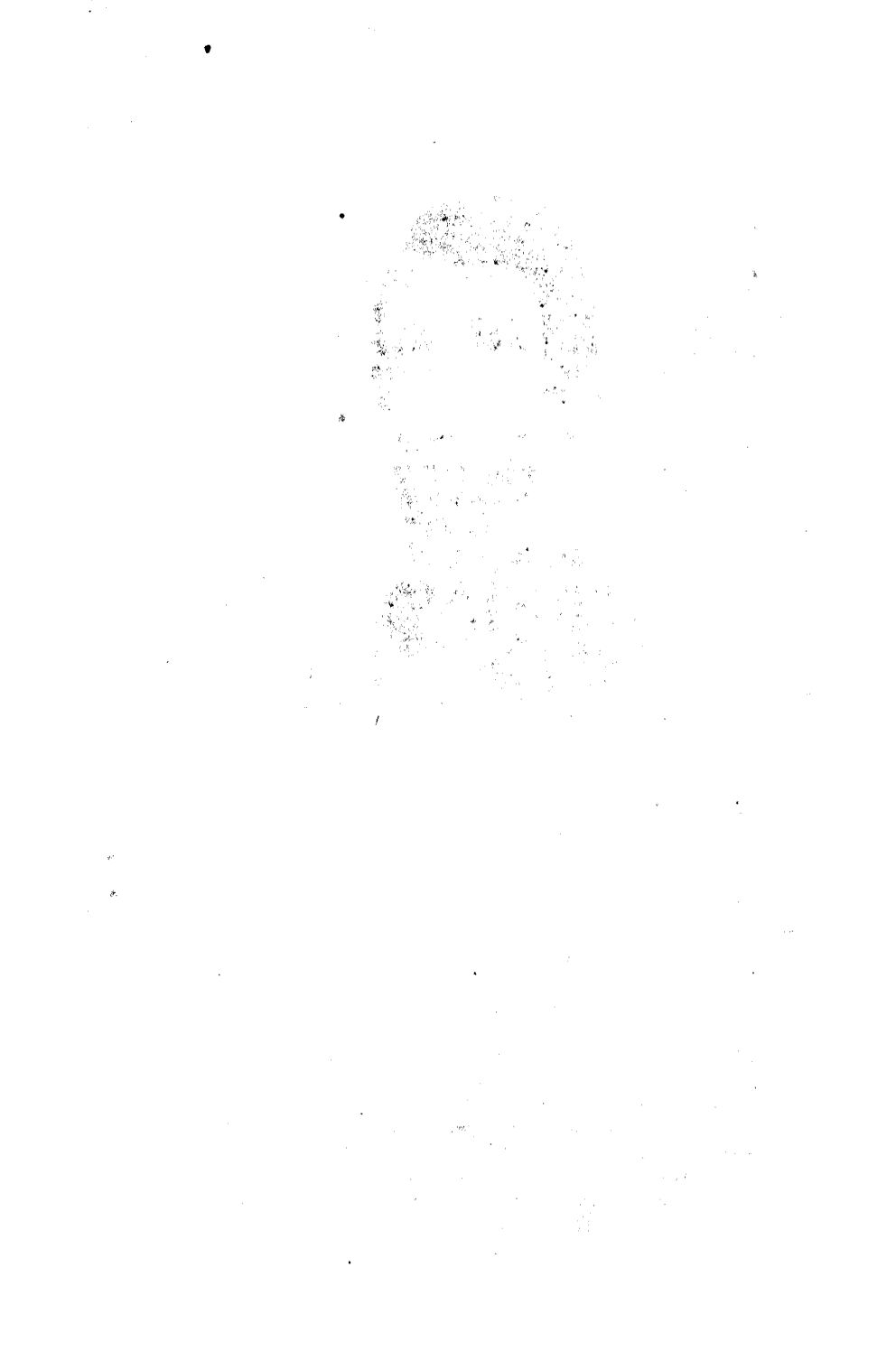
FURTHER DETAILS OF THE ORGANIZATION OF THE DEPARTMENT, OFFICE OF CHIEF CLERK, ETC.

It has already been suggested that the title of Chief Clerk of the Department does not fully express the importance of his position or the nature of his duties. It is sometimes spoken of as the confidential clerk of the Secretary, but this name also fails to convey a true idea of his relation to the business of the Department. The duties and labors of the Navy Department naturally separate into two divisions, one of which is very properly supervised by one having nautical skill, while the management of the other requires great business capacity and a general knowledge of business affairs rather than the special attainments of the seaman.

On the Assistant Secretary devolved what more particularly relates to nautical affairs, while the Chief Clerk was placed at the head of the business branch of the service; both of these officers holding nearly the same general relation to the Secretary. William Faxon* held this position during the war, and also during a portion of Mr. Johnson's administration.

* Mr. FAXON was born in Hartford, Connecticut, on the 17th of April, 1822. He connected himself early in life with a newspaper and printing office, and received thus the advantages of a business which has produced more good scholars, and clear, vigorous writers than any other in this country, which does not include a classical education. After having made himself acquainted with this business in the office of the *Connecticut Courant*, and having prepared himself not only to be a publisher, but a writer, he obtained an interest in that paper and became one of its editors.

The *Hartford Evening Press* (daily), and the *Connecticut Press* (weekly), the first Republican papers in Connecticut, were also established under the direction of Mr. Faxon, in February, 1856. In this new and more extended sphere of action, and in the daily discussion of those great questions which have since upturned the very founda-





Wm. W. Faxon

NEW YORK, N. Y.



The position of the Chief Clerk makes him the medium of communication between the Secretary and the business world in all those matters which relate to the practical working and carrying out of the plans adopted. Others might decide upon the form and size of a ship, but the actual building of the vessel, the contracts, the payments, these must, of course, be committed to the proper hands; but for the general supervision of these things, as well as for a condensed statement of all, the Secretary depends upon the Chief Clerk. The same is true of all the other countless operations of the Department. He is the engineer-in-chief of the operating force. He arranges the details, and also sums up and generalizes results, that at a glance the Secretary may survey the whole field and understand the condition of affairs.

The amount of business which passed through this officer's hands may be partially seen by considering that about six hundred ships were purchased, built, or hired during the war; that armaments, crews, and stores were to be provided for all these; that contracts for guns, for machinery, for stores, for timber and materials of all descriptions were to be entered into, and for all these payment was to be made in due time. These things give only an inadequate idea of the amount and variety of business that was constantly demanding attention, and which required the utmost vigilance and unwearied care. To arrange and systematize all this, to divide all aright among the appropriate bureaus, to conduct or supervise the correspondence which did not require the Secretary's own hand, was particularly,

tions of society, and in both social and political relations with the leading men of the State, Mr. Faxon acquired the influence, the breadth of view, the variety of information, and the firmness of conviction which fitted him for the important part which he has since performed in our great national struggle. He was thus prepared to give his services to his country not merely from a cool sense of duty, but with an ardent love for the right and for the Union which stimulated all his powers. His knowledge of the political interests and movements of the country enabled him to judge of the bearing and probable effect of important measures, and his advice was often sought and ever valued by the Secretary.

Scarcely had the brief sketch of the Chief Clerk been finished, when Captain Fox, having been sent to Europe in the *Miantonomoh*, Mr. Faxon was nominated to the Senate as Assistant Secretary of the Navy, and was at once confirmed, without an opposing voice.

during the war, a task which demanded uncommon business accuracy and tact.

The quiet of the Navy Department has misled many a bustling man, who has rushed in from the show and bustle and noise of Wall Street or commercial circles, and finding himself in a spot where all was hushed, no Babel of brokers' boards or auction-rooms, no steam-engine's roar and clatter, has concluded, while the perspiration was drying on his own face, that all about him were either asleep or unbearably dull. The writer has heard very busy men say they disliked to visit the Navy Department, it was such a sleepy place. Members of Congress going from the *activities* and *lively* scenes of the House up to the Department, find all so still, no loud debate, or universal conversation or stir, that they feel as if nothing were going on.

Correspondents and editors of some newspapers have thought they were publishing a very profound observation when they described the Secretary and his associates as dozing over the perils of the country, and thousands really believed that dozing inactivity reigned over all the operations of the Department. The War Department had its camps, and forts, and waving banners everywhere, its pomp of armies, its march of columns through the streets, the tramp of its cavalry, its rumbling batteries, its long army trains, its orderlies dashing swiftly about, and thousands of uniforms flashing on prancing steeds, and before the eyes of the people daily were the gay pomp and circumstance of war, and all could see that something was being done. And great and glorious things were indeed done. But the public made an egregious mistake when they concluded that nothing important was going forward in the quiet rooms of the Navy Department, because there was no bustle or noise. The stir which they occasioned was up and down three thousand miles of coast, along thousands of miles of Western rivers, and in the harbors of the South, and on the ocean far removed from the observation of the public, unheard in great degree, and therefore unknown. Instead of dashing orderlies and messengers rushing to and from the Navy Department, the unheard telegraph brought and received its orders, and the public saw not the fleets that these orders put in motion, and had no means of estimating aright the work they were performing. A single

stroke upon a bell, the handing of a dispatch to a messenger, would probably be all that an observer could hear or see of a transaction upon which the most important interests depended, and he might therefore suppose, as many did, that little or nothing was being accomplished. The Chief Clerk obtained a remarkable knowledge of details. In collecting the materials for this history, the writer seldom knew him to hesitate in regard to any point respecting which information was needed. He either knew himself what was sought for, or he could refer to the book, or the record, or the person from which the knowledge could be obtained; and much that is valuable in the work is due to the unwearied kindness with which all possible aid was afforded. The amount of work which he was able to perform was owing to the fact that all his means were orderly disposed and always within his reach, and the machinery of his office wrought not only with rapidity but with machine-like accuracy. By common consent he was admirably fitted for the position he occupied, and he performed a work during the war much more important than is generally supposed.

It is believed that such a difficult and gigantic task as was so successfully performed by the Navy Department was never before executed with so little of bustle, or surface agitation of any kind. It was due very much to the fact that the Secretary selected his subordinates with discrimination, so that the different branches of the work were committed to those who were eminently the men for the station, and that all worked together in harmony. In the working out of the plans of the Department, and in the supervision of the whole business machinery, by which results were to be reached, the Chief Clerk found his appropriate place, a wide and important sphere of action, which could be well filled only by one of great business talent and skill. The power, then, with which the Department was worked, was, first of all, the combined force of these three minds, each laboring in its own sphere, but unitedly to a common end, and the quiet with which they wrought was indicative not of inaction, but of order and of real power.

The war having been finished, a large proportion of the business of the peace establishment came naturally within the sphere which the Chief Clerk had formerly occupied, and Mr.

Faxon found himself already prepared for a position which was new rather in name than in the character of its duties. He brought to the office one important qualification, the faculty of attending to a great variety of details without confusion, and of turning easily from one subject to another and giving due attention to each. Many men possessing every other quality for business have failed from the lack of this. Having become occupied with one affair, a sudden interruption is apt to disturb them. They cannot readily call off the mind from what it is considering and turn to the new question, and therefore business drags or gets into confusion, and those waiting for action become impatient. In such an office as that of the Assistant Secretary of the Navy, a single hour will sometimes bring what would seem an almost impossible variety of affairs. Senators, chairmen of House committees, contractors, mothers, wives, sisters, to inquire where their friends are, men who seek appointments for themselves or others, clerks with all kinds of papers to be inspected or signed, men with every sort of complaints, friends to make a call, collectors of autographs, perhaps a historian baffled in his hunt for a fact—all these sometimes crowd a morning hour, and each would feel insulted or grieved if his case were not deemed to be of very special and peculiar importance.

CHAPTER V.

THE CONDITION OF THE COUNTRY, AND THE STATE OF PUBLIC OPINION AT THE TIME OF MR. LINCOLN'S INAUGURATION.

THE bearing which this topic has upon the operations of the Navy Department will be seen by considering that if the war had been against a foreign power, the united loyalty and enthusiasm of the people would have rendered the task of the Government a comparatively easy one. Crippled though it was in its resources, while a wide-spread sympathy with the rebellion even in the States which did not secede, and a general disposition to make concessions rather than **resort** to force, would render any suitable preparation for war an **almost** impossible thing. The difficulties of the situation would also be largely increased if the proper resources of the Government were so disposed, by previous treachery, as to be beyond control.

In order, therefore, to show aright the work actually performed by the Navy Department, the difficulties which beset, and the obstacles which were surmounted, it is necessary to present a brief statement of the condition of the country at the beginning of Mr. Lincoln's administration.

Probably no nation was ever more completely unprepared for a great conflict than was our Government when the rebels committed their first hostile acts by seizing forts, arsenals, and ships. A dismantled ship without an armament, a fortress with its guns dismounted and spiked, and the garrison gone, would not adequately represent the utter impotency of the United States for attack or defence, when it was first clearly seen that there was no escape from war without yielding both the nation's honor and life.

Many who were rebels in heart and purpose had a control in the Government just previous to the war, and the most powerful minds of the South, and some even at the North, were conspiring with these State officers, so to destroy the credit of the Government, so to dispose of the Navy and Army, so to scatter or destroy its resources or transfer them to the possession of the South, as to render it impossible for it either to strike an offensive blow, or to defend itself when the plan of the traitors was mature.

The little Army was beyond reach on the frontier, under command of General Twiggs, selected for his work ; the Navy was chiefly in foreign seas, or remote from the spot where ships would be needed most and soonest ; forts, arsenals, ships, navy-yards were placed, so far as possible, in charge of the friends of the South ; and in every one of the Departments of the Government were men, and some of them in important places, who used their situations as far as possible to give information of every plan and movement of the Government, and to aid the plot of the conspirators.

In addition to these almost insuperable difficulties of a material nature, the country had lost much of its moral power. The habit of yielding to Southern dictation seemed to have sapped the manhood of the North. The life-force of the nation was absorbed in the pursuits of peace, and peace was demanded by every interest of the merchant, the manufacturer, the banker, and the man of wealth. They were at first slow to put a higher estimate upon principle, and national unity, and national honor, than they did upon money.

Many, perhaps most of our leading statesmen, men who largely controlled the opinions of the people, were entirely mistaken in regard to the intentions of the Southern leaders. They could not believe that it was really their settled purpose to organize a separate government, even at the perils and cost of war. It seemed to most an incredible thing that men who not only had no just cause of complaint, but had freely enjoyed more than their due share of the honors, the profits, and general blessings of our common Government, whose every important demand had been granted by the North, in a spirit which often passed the bounds of proper concession, could plot the ruin of

the country from whose protecting power and cherishing kindness they had received their all.

Men would not believe that Americans could be guilty of so foul a crime, and therefore the very enormity of this iniquity, by placing it beyond belief, gave the conspirators a temporary security, and time to perfect their plot. They retained boldly their places under the Government, using their positions to plan and secure the success of their cause. This also was for a time an effectual shield. Who could believe that Americans would cast away fidelity to a trust, honor, manliness, and even the solemnity of their official oaths, and remain in the Departments, in the Senate and House, in the Army and Navy, the recognized officers of the Government, receiving their proper pay, while every thought and feeling of their hearts was false to their trusts, and every act was that of a deliberate traitor?

It is an honorable proof of the superior moral condition of the North that it could form no conception of such a monstrous crime, and refused at first to believe it even a possible thing. Hence the leading thought of our foremost men at the time of Mr. Lincoln's inauguration seemed to be, "The South intends in this movement only to obtain some fresh concessions, some new guaranties for her property and what she deems to be her rights, and in view of the priceless value of the Union we must concede to the utmost limits of safety and honor." What those limits were it is well perhaps to consider, in order to show what the state of the public mind was when the Navy Department began its operations.

At the close of Mr. Buchanan's administration the rebellion had made such progress that from Pennsylvania to Key West only three forts, Fortress Monroe, Sumter with its handful of eighty men, and Pickens at Pensacola, remained to the Government of all its property and defences on the Southern coast; and because this general statement gives no clear idea of the loss, or the disadvantage at which it placed the Government, the following account is presented in detail of the fortifications and property which the insurgents seized: Fort Moultrie and Castle Pinckney, in Charleston harbor; Forts Fisher, Caswell, and Macon, commanding the entrance to Beaufort and Wilmington; Fort Pulaski, at Savannah; Forts Morgan and Gaines, at

Mobile ; Forts Philip and Jackson, below New Orleans ; Fort Pike, on Lake Pontchartrain ; Forts Barrancas and McRae, at Pensacola ; and the Army and all the public property in Texas. Add to this list the arsenals, custom-houses, mints, post-offices, revenue cutters, and sub-treasuries, which were all seized throughout the South, and it is estimated that the rebels had taken from the Government thirty million dollars' worth of property, besides seizing nearly all the defences of the South, before Mr. Lincoln was inaugurated.

It is not surprising that the boldest and truest-hearted men should have been startled at this first scene in the tragedy ; and there is perhaps little room for censure, because their first efforts were to avert the storm by hastening with various offers of concession. True it is, that viewed in the light of subsequent events, some of the propositions made seem almost like a timid surrender of the very manhood of the North, like the abandonment of essential principles ; but we must remember that the light of this day had not then risen upon the country.

A brief statement of the proffered concessions and various efforts for peace, will show how opposed to war was the heart of the country, how reluctant to begin violent resistance even to treason ; and this will reveal some of the difficulties which beset the Navy Department as well as other branches of the Government.

They were called upon to inaugurate war on the most stupendous scale, while many of our most trusted leaders were almost on their knees, desiring peace on terms that seem to us humiliating now, and which demoralized, almost fatally, the people of the country. Without ships or *matériel* and the whole country averse to war, the Navy Department was called upon to create a Navy equal to that of France or England ; and when we remember that this work was actually done, let the country consider whether any thing less than consummate business skill, far-seeing sagacity, promptness, energy, and executive ability of the highest order, could have performed the task.

Mr. Buchanan's administration closed with the declaration that a State could not constitutionally be coerced, a sentiment which would annihilate the national Government, and that gave

full sanction to every doctrine and act of the traitors. When we consider that this opinion went forth from the President of the United States, clothed with all the official power of that high position, and that it came from the chief of a great Northern party, it is seen that it was an efficient instrument for dividing the North, for misleading and corrupting the people, and for encouraging the hearts of the traitors. It was like attempting the moral disarming of the North, the sapping of the very truths and principles on which our Government stands.

It is sufficient to state the main points of the propositions which the leaders of the Republican party, including the President, made to the insurgents after the inauguration of Mr. Lincoln :

They offered additional guaranties for the prompt, faithful, and unobstructed operation of the Fugitive Slave Law.

They proposed to pay the full value of every slave not recovered, through any assistance given in the Free States to the fugitive.

They were willing to amend the Constitution so as to place slavery beyond the control of Congress, and render it forever secure as one of the recognized, rightful, and perpetual institutions of the country.

This last proposition was made by Mr. Corwin in the House, and by Mr. Seward in the Peace Conference, and was passed as a joint resolution by a two-thirds majority both in the House and in the Senate. Is it possible to conceive of any measures better calculated than these to blind and sear the conscience of the North? They reduced the country to a state of moral impotency in regard to the great issues before it; and how could the Departments expect or even hope for a vigorous response when the call was made for a war upon those who declared they had seceded in order to build an empire on the corner-stone of slavery?

What was the crime in this, when the Northern leaders had just offered to assume all the guilt of slavery, and make it, by the Constitution itself, perpetual? There was at first no moral principle to which to appeal, and no moral basis for the war to rest upon; and the Navy Department felt the full force

of the difficulty. The whole service seemed for a time to be demoralized, and disloyalty and treachery were on all sides thwarting the plans of the Government.

The following is related as one only among the countless phases of the treachery which the Navy Department was called upon to meet and baffle: In the earlier stages of the conflict the rebels were particularly anxious to obtain information concerning the movements of the Navy, and even the intentions of the Secretary. They knew that if they could penetrate the secrets of this Department, they could anticipate any attempt to succor Sumter or recapture the other Southern forts. No art which could be devised by men skilled in intrigue was left untried to gain this coveted knowledge.

In the evening of the first of April, 1861, a package was brought from the President by his private secretary, and handed to the Secretary of the Navy, which contained a very remarkable order. At that time Commodore Stringham was performing the duties which belong to the chief of the Bureau of Detail, a bureau not then created. These duties involve of course the most intimate and confidential relations with the Secretary of the Navy. The detailing officer would necessarily know the whole *personnel* of the Navy, the position and duties of every officer, and even every movement proposed or actual. With this officer under rebel influences, almost the private thoughts of the Secretary might be revealed to the conspirators. The loyalty of Commodore Stringham was beyond suspicion; the conspirators knew he could not be approached.

The order already mentioned provided, first of all, for the removal of Commodore Stringham to a distant station, to take command of the Home Squadron; and then directed the Secretary to appoint in his place Captain Samuel Barron, with special instructions to put him in possession of full information concerning the Navy, its officers, and its movements. The Secretary, knowing well the character and sentiments of Captain Barron, went immediately to the President. As it was quite an unusual hour for such an interview, the President, as the Secretary entered his room, exclaimed, pleasantly, "What have I been doing wrong now?" The Secretary showed him the order, and explained to him that the sympathies of Barron

were all warmly with the conspirators, and that he could not think of having a man thrust into his Department and in such a position, especially one whom he had no reason to trust. The President replied that he had signed many papers that day which he had not examined, and that he knew nothing himself of Barron; that he had signed the order as he had other papers, trusting to those in whom he thought he ought to confide, and concluded by telling the Secretary to pay no attention to the order and retain Commodore Stringham in his place, or select for it any other man whom he approved.

It is unnecessary perhaps to inquire where or how this dangerous paper originated, but it must have passed through high places somewhere before it could reach the desk of the President. Two facts will throw much light upon the designs of the originator of this order, whoever he may have been.

This Captain Samuel Barron is the man who, on the 21st of January preceding, had been selected by Secretary Toucey to proceed to Pensacola and prevent any United States vessels from entering the harbor; the negotiator, as supposed, of an armistice entered into by Mr. Buchanan and the leaders, to which the commander of the Sabine refers in his letter to Secretary Welles, dated "Off Pensacola, April 1, 1861," in which letter he states that he declined to land troops sent out by General Scott, because he had previous orders from the Navy Department to the contrary. The orders to which he refers are those from Secretary Toucey, carried out by this Samuel Barron, and which forbade any United States vessels from entering the harbor. Barron soon after deserted his flag and openly espoused the rebel cause, and was one of the very first officers captured after the war began.

It is not easy to mistake the design of an order which, if carried out, would have placed a confidential tool of the leaders where he would necessarily have known most of the secrets and designs of the Navy Department; where, aided by the conspirators, he could seriously have embarrassed its operations, and, at the same time, keep them advised of every movement of the Government.

Such was the condition of the country and its resources, and such the opinions and feelings which pervaded the land; and

such were the views and propositions of our leading politicians and statesmen, when at length the North cast aside its wishes for conciliation and peace to find itself betrayed, stripped of its resources, disarmed, and demoralized, and in that state confronting a rebellion fully organized, perfectly united, armed with the spoils of the Government, confident of success, enthusiastically supported by France and England, and with active, sympathizing friends spread over all the North.

Under such circumstances the Navy Department was called upon to perform a work which most here and in Europe believed to be an impossible task, even if it had the fleets of England or France at its disposal. The nature of this work, and the means at the disposal of the Department for executing it, will form the subject of another chapter.

CHAPTER VI.

THE QUESTION OF THE BLOCKADE.

IN the very beginning of the rebellion the Government was called upon to decide one of the most important questions of the war. Indeed, when viewed in the light of subsequent events, it is seen to have been the point on which the policy of foreign nations hinged, and which necessarily controlled our own toward the insurgents. It was the main cause which shaped the character of the contest both abroad and at home. That question was, whether the Government should proclaim a blockade, or declare the ports of the insurgent States to be closed. The Cabinet was divided in opinion, and from the first the Secretary of the Navy took decided ground in favor of closing the ports, a position which he never abandoned, and subsequent events have abundantly proved his sagacity and his statesmanship.

On the 19th of April, 1861, the President issued his proclamation establishing a "blockade" for the ports of South Carolina, Georgia, Alabama, Florida, Mississippi, Louisiana, and Texas. A second proclamation, issued on the 27th of April, extended this "blockade to the ports of Virginia and North Carolina," and thus it was made to cover the whole coast of the States in rebellion.

On the 13th of July, 1861, Congress evidently supposing that the policy of the Government on this point was not permanently settled, authorized the President to "*close the ports*" of any States in insurrection, and the question thus presented between this course and a "blockade" became the subject of discussion in the Cabinet.

The Secretary of the Navy adhering to his opinion that the ports should be *closed* instead of being blockaded, the President requested him to make a more definite statement of his views in writing.

In answer to this request, the Secretary presented a paper to the President, on the 5th of August, 1861, of which the following is a synopsis; and which shows how clearly Mr. Welles and those who acted with him, at this early stage of the conflict, saw all the main bearings of this grave question, upon our relations at home and abroad.

These arguments have since been thrown into much clearer light and bolder relief, by the positions assumed by Lord Russell in his correspondence with Mr. Adams, concerning the Alabama and her piratical consorts.

The Secretary, in this paper, first assumes that the decision must necessarily determine, so far as the act of our Government could do it, whether the conflict should be regarded as a mere insurrection on the part of the Southern States, and therefore a domestic affair, or whether we should proclaim it a true war between independent powers, to be governed by the rules and practice of international law.

He urged this view from the generally conceded fact, that a blockade can be established only against the ports of a foreign power, and referred to the opinion of eminent jurists, that a nation cannot blockade its own ports; but that commerce must be excluded from them, if at all, by closing them.

From this principle of international law he argued, that to establish a blockade of the Southern ports would be, in effect, and according to the usages of the law of nations, to proclaim them lawful belligerents, and invested with all the rights of an independent power; remove from them the name and the odium of a rebellion; give to their cause, in the eyes of many, the moral basis of justifiable revolution, and impart to it a strength which it could not otherwise obtain.

That to be consistent, their collectors, revenue officers, clearances, registers, etc., must be recognized as legitimate.

The Secretary reminded the President, that in all our policy, both legislative and executive, we were treating the rebels, as such, as mere insurgents, and that the Government could not

occupy this position in its general policy, and then change its ground to suit its convenience, and, by proclaiming a blockade, admit them to be independent and lawful belligerents. They could not be treated both as rebels, guilty of high treason, and also as engaged in lawful war.

He proceeded to point out the difference between a blockade and a closing of ports. The first carries with it the consequences already mentioned; the last removes the whole contest from the sphere of international law, makes of it purely a domestic question, and brings every one attempting to enter a port thus closed, under our municipal laws, to be treated according to the decision of our own courts; while it would leave the rebels in their proper position, and with their true name and character as traitors.

The manly American spirit which has characterized the Department and the Navy during the whole war is well exhibited in the following extract from the Secretary's paper. The country may feel assured that the honor of the nation has ever been safe in the hands of the Navy :

"Our right as a nation to close our own ports will not, I take it for granted, be questioned, or be permitted to be questioned. They are within our own jurisdiction and control, and the right cannot be surrendered to foreign dictation without a surrender of our nationality.

"I am aware that Lord John Russell has recently asserted a contrary opinion, evidently intended as an admonition to us; in which he undertakes to maintain that the power and authority of a government over its own ports is less in a period of insurrection or civil commotion than in peaceful times. In other words, Great Britain declares that when a country needs to exercise its authority most, it shall be dispossessed of that authority by foreign interference; that when the integrity of a country is threatened by insurgents, foreign governments will interpose and assert dismemberment to be a foregone conclusion; that national law is inoperative when its enforcement is essential to national existence; that we must rely upon the law of nations as expounded by the British admirals, instead of our own laws and our own officers, for governing our own country, and regulating its domestic affairs. I do not admit the morality nor the legality of the reasoning of the British minister, nor do I believe the British Government would tolerate such dictation or interference in her domestic affairs. Were there no fear of Great

Britain, no threat or apprehension from foreign powers, should we hesitate for one moment on this question of closing our own ports? If not, shall we, in our misfortune, submit to the arrogance and dictation of foreign governments in relation to our domestic affairs?"

Again, the Secretary says, in regard to this measure of closing the ports:

"It is one strictly national and rightful, attended with no doubts or difficulties, except from foreign interference, which should not be permitted to control our internal domestic affairs for a moment."

In these sentiments, the true American spirit speaks in manly tones—the same spirit that animated the Navy of 1812. Whoever else may have hesitated or quailed at a foreign threat, the Navy never did less than proudly and firmly defend the national honor.

The Secretary next asserts his fear that the long coast-line of more than three thousand miles could not be effectually guarded by any force at our command. In this he but shared the opinion of all Europe, who sneered at the idea of such a blockade; and it is not at all surprising that in common with all his associates he should, at that early period of the rebellion, have underrated the power and resources of the country, or was not fully aware of the energy and executive ability of the Department of which he was the chief, and which he so signally manifested in the hour of trial.

The advantages of the Secretary's plan are so great and so manifest, as viewed in the light of what has since occurred, that it seems marvellous they should not, even then, have been clearly seen. Had that plan been adopted, it would have been a clear, decided, and continual proclamation to the world, that the United States considered those in arms against the Government to be rebels and traitors; and that it claimed the right to treat them as such, and not as lawful belligerents. Nor would this position have precluded the Government from making an arrangement for the exchange of prisoners, for such an agreement could be made even with a band of robbers, without acknowledging them to be engaged in a lawful occupation.

There could have been no fitting out from British or other

ports of such piratical cruisers as the *Alabama*, because there would have been no belligerents at the South, and consequently no neutrals abroad. The Government, after it had declared, through Mr. Seward's dispatch to Mr. Adams, May 21, 1861, that it would treat privateers in the insurgent service *as pirates*, would not have been compelled to abandon its position, and receive and treat them as prisoners of war, because the blockade had virtually recognized them as belligerents.

It is true that Jefferson Davis threatened to retaliate, and take life for life, if the Government should execute as pirates any whom it might capture at sea; but to assert the right and maintain the principle would have been no more difficult or dangerous than to declare them rebels on the land, and guilty of treason, and then exchange them as prisoners of war.

Had the insurgents been sternly held, from first to last, to all the just consequences of rebellion and treason, our first decided successes would have thrown the moral influence of the world against them; the proper stigma would have been attached to their cause, and they would have been shorn of their strength and confidence together. At the very worst, could any conceivable form of retaliation have equalled the horrors of murdering our brave, true-hearted men, as they did by thousands and thousands, in those Southern prisons?

In the South were many scenes of fatal violence to soldiers and Union men; and it can scarcely be doubted now, that had the Government closed the ports, and had it treated, from first to last, all captured on the sea as pirates, and all on the land as guilty of treason, and then punished or showed mercy according to its own discretion, it would have saved at least a hundred thousand Northern lives. Had the ports been closed, the Government would not have sanctioned the doctrine, that the States, by seceding and commencing hostilities, gained the *status* of an independent or foreign power, a position virtually conceded to them by the blockade, nor would it have incurred the charge of inconsistency, since so freely made, in demanding that the Southern leaders should sue for pardon, as rebels, guilty of treason, when by the blockade they had been presented to all the world as having belligerent rights. The establishment of the blockade strengthened the insurgents' cause, both at home and

abroad, because, in their opinion, and in the estimation of Europe, it conceded to the Confederates a separate national existence. If there was fear of England, will not every true American respond to the sentiment of the Secretary of the Navy, when he said that no menace from a foreign power should deter us from asserting our rights and maintaining our honor?

Had the policy of closing the ports been adopted, England would have been deprived of the main shelter, from behind which she has carried on against us a covert war; nor would she, when charged with precipitancy in declaring the rebels belligerents, have been able to reply, as she has done: "Your Government was the first to acknowledge them, by proclaiming a blockade."

Such is a brief statement of the facts concerning this important question; and the country will not fail to appreciate the high sense of national honor, the true American spirit, and the true statesmanship, that marked the course of the Navy Department in that trying hour.

CHAPTER VII.

THE WORK REQUIRED OF THE NAVY.

WHEN it was decided to blockade our ports, instead of closing them, a work was laid upon the Navy, the magnitude of which is entirely unknown to most of the people, because very few are acquainted with the facts, and fewer still at the beginning of the war had any clear idea of what was necessary to be done.

The conflict was so novel in its character, that there were no precedents to consult, and no old landmarks to guide. A single example will show how far many of our foremost men were from understanding the real nature of the war, and of the task which had been committed to the Navy. The Navy Department, at first, selected some of the most prominent and trusted shipping merchants in New York, and consulted with them, as an informal board of advisers, in regard to the purchase and fitting out of vessels; and when twenty had been obtained, one of the most eminent of these advisers gave it, as his opinion, that it would require *thirty more sailing vessels to complete the blockade*. The idea of maintaining a blockade with a steam-fleet had then entered the minds of few outside of the Department and its officers.

Take this proposition from an experienced shipping merchant, to obtain *thirty more sailing vessels to complete* the blockade, and place it by the side of the fact that it actually required nearly *six hundred vessels*—most of them steamers—to seal up our coast-line, and it will be seen that, before the Navy Department could take any very important steps, it was necessary to convince even well-informed men of the greatness

of the work to be done. In order to understand the difficulty of maintaining on our shores an effective blockade, one must consider the peculiar formation of the coast. The true outer coast-line, from the northern boundary of Virginia to Mexico, is more than three thousand miles in length; and had it been necessary merely to guard the *ports* of the principal cities of the South, the task would have been comparatively easy. But this external coast-line is merely the outer edge of what may almost be called a series of islands—some long, some short, some wide, and others very narrow—stretching along the whole Atlantic shore, behind which there are sounds and connecting channels, forming an almost continuous line of water, navigable for small vessels, from Norfolk to Florida. This outer coast-line is cut through by almost countless navigable inlets, communicating with the bays and channels within, and also with an inner coast-line, even more extensive than the outer one. So that, although the main port of a city might be effectually guarded, the small, swift blockade-runner might pass through some inlet, far above or below, and glide securely to her destination, along these inner sounds and channels.

Along all this internal coast, and up and down the rivers and bays, an active commerce might be carried on while the blockading fleet was guarding the sea entrances to the main harbors of important towns. What rendered the work still more difficult was, that these inlets, opening often through shifting sands, are constantly changing, so that the channel of to-day may be closed to-morrow; and where to-day no ship can pass, perhaps the winds and waves will to-morrow plough a channel through. The blockade-runners were guided by a perfect system of shore signals, which were kindly supplied to all needing them, as is said, by the British consul at Havana; while the vessels were taken in by pilots perfectly acquainted with every mile of the coast. Add to this the fact, that the moment the policy of the two countries was announced, and the blockade was proclaimed, the science, the wealth, the mechanical skill, and the ingenuity of England were largely employed to devise and execute the most promising plans for violating the blockade, and for supplying the rebels with munitions of war and whatever they might need beside.

It is believed that the keen, icy, degrading selfishness of England, as shown in her conduct then, is without a parallel in the history of nations. It reached that pitch of shamelessness where there was not even a pretence of any regard for justice, or any moral principle whatever; not even a reference to any noble impulse, or a generous sentiment; no feeling of sympathy or pity for a people of their own kindred, struggling to maintain a lawful government against a formidable rebellion, to maintain law, and order, and human rights, and free institutions, against traitors leagued for the overthrow of all these, and whose success would have stopped the progress of American civilization, and have given a new lease of power to the worst despotisms of Europe.

The course of England was the most complete vindication of her own writers who charge her with having become insensible to any great moral principle, to every great idea, and alive only to the one degrading purpose of heaping up wealth, careless alike whether she feeds her greed upon the blood and tears of her own children, or upon the weakness or misfortunes of other nations. Whatever may be thought of this, one fact is beyond dispute: Great Britain, by her American policy, has corrupted her own public sentiment, has diminished the moral force of the nation, and has thus inflicted upon herself a wrong which she cannot soon repair. She is incapable, for the present, either of a great enterprise or of an heroic defence. She will need the furnace of affliction to purge this mammon dross away. She will require the pressure and the inspiration of trial before she will regain what was once noble in her character. She cannot reply to such statements, that other nations have done similar things.

Doubtless individuals of other lands have been guilty of acts like hers. But where else shall we find an example of the leading classes of a whole nation cheering on the manifest wrong, casting all true convictions and all former professions alike away, giving themselves to the impossible task of proving the truth a lie, and making falsehood their watchword? Where else do we find a nation becoming hot and enthusiastic in evil merely to make herself richer, and to gratify a low jealousy of her own offspring, because they were too prosperous to suit her

ambition and her pride? America came forth from the war far nobler and stronger than ever, because she fought for a great idea; but when England finished her experiment she was weaker and more demoralized than ever before, and more completely the slave of mammon, and low and selfish aims.

It should not, however, be supposed that England wrought sluggishly because she was moved by no great or noble idea. She worked under an evil inspiration, that aroused her, so far as one can be, in the service of the wrong. She was in true sympathy with the rebellion; she was fired with the corrupting enthusiasm of the traitors; and she desired, with an earnestness not exceeded by that of Jefferson Davis himself, the humbling of the North, and the separation of the Union. If any one doubts this, let him read the comments of the British press upon the sinking of the Alabama. With a few noble exceptions, the English treated that as if it were a personal disgrace, a humbling of their own flag. The capture of the *Guerriere* by the Constitution scarcely produced a deeper mortification. The important fact in this connection is, that this exhibition of intense feeling was natural and even inevitable, for England had made the Confederate cause her own, and it was her ship, her men, her guns, her courage and skill, her national honor, that were that day on trial. It was, by representative vessels, a battle between the wooden Navy of England and that of America, and it was really the flag of Britain which was lowered to the stripes and stars.

Such was the spirit and such the conduct of England, that the Navy Department was called in the outset to a contest, with abundant capital and with the most daring enterprise, with the skill and ingenuity of the English commercial marine. This hostile and selfish policy of Great Britain was directed toward a double purpose. The piratical cruisers fitted out in her harbors were to destroy, so far as possible, American commerce, while the terror of their operations would drive much of the remainder into English bottoms, and through the blockade-runners she hoped to monopolize the commerce of the South.

These remarks will show some of the main difficulties which beset the Navy Department in the first weeks of the rebellion. No time was lost by our eminently neutral friends after the es-

tablishment of the blockade. The swiftest steamers in the merchant service of England were selected, and with cargoes suited to the wants of the rebels were started for Southern ports; and the uselessness of sailing vessels for a coast-guard was seen at once, when the blockade was to be tested by steamers which could make fourteen knots per hour.

Not satisfied with the injury which could be inflicted by the vessels already afloat, Englishmen prepared, as rapidly as possible, a fleet of new steamers, built especially for this rebel trade, adapted to the shallow inlets and sounds and inner channels of the South; and these new steamers combined every excellence suited to their work which the skill and science and capital of England could command.

These English steamers, the latest triumph of British art and naval science, were to be watched, and met, and foiled, along all the three thousand miles of outer coast-line, along the corresponding inner coast, the inlets and sounds and interior channels of the South. Hence it was necessary, not only to have an outside blockading fleet, but also to command those inner waters where rebel commerce was sheltered, and where the conspirators were busy in building a navy of their own.

The following extract from a letter, dated on board the United States steamer Roanoke, will illustrate the difficulty of blockading the Southern coast:

It is well known that the rebels have had, with but few exceptions, full and undisputed possession of those countless inland seas which dot the whole range of the Southern coast, and which are only separated from the great ocean by narrow necks of land. These places, since the commencement of the rebellion, have been the rendezvous for the greater portion of the privateers and pirates that owe their existence to the Confederate Government.

Too many places of the above character, it is feared, have been too insecurely blockaded, there being so many inlets into them which are wholly unknown to the officers and men of our Navy, and the chances thus offered enable the rebels to carry on a very extensive commerce, and thus supply their army and themselves with the articles essentially necessary in such times.

The Roanoke was powerless to interfere or stop this alarming state of things, owing to the reasons above given. We could not go into the

inlets and ferret them out, which is all that is required to effectually kill this smuggling business. What we require immediately to check this great evil are gunboats of little draught of water, which can dart with ease in and around the passes alluded to, without the fear of getting aground and being blown to atoms by the merciless storms that rage there.

If the Government would place at the disposal of able and efficient mariners a fleet of twelve or fifteen such gunboats as the *Resolute*, *Reliance*, or *Thomas Freeborn*, drawing not over six and a half feet of water, all well armed with rifle-cannon, and manned by experienced seamen, we could at once take possession of all their inland waters, and suddenly and satisfactorily stop the smuggling business now so extensively carried on by the enemy. More than this, we could undoubtedly also capture many of their privateers, which now make the waters boil as they glide so swiftly over them in perfect security, with their welcome and valuable cargoes for the traitors composing the rebel army. I repeat it, such a monstrosity as our ship is valueless to impede the progress of these fleet little craft, whose crews are intimately acquainted with every hole, corner, and hiding-place which that mysterious coast affords. It seems that every new storm makes a new inlet, and in the face of such facts how can it be expected that a few large steamers should be able to guard them? There are many instances similar to our own, where vessels blockading cannot come within miles of these small inlets, all of which are open to these little privateers.

This necessity of controlling the interior waters will explain some of the earlier naval expeditions of the war.

But the closing of the Southern ports against this British commerce was, by no means, all that was required of the Navy, even along the coast. It was quite as important to seal every harbor, inlet, and river's mouth against the coming out of the ships of the rebels. The nature and the peril of this duty may be known by calling to mind the *Merrimack*, the *Albemarle*, the *Atlanta*, the *Tennessee*, the *Louisiana*, and the *Mississippi*, each one of which was at least a match for any iron-clad in the French or English navy, armed as they were at the beginning of the war.

Had any one of these vessels reached the ocean in safety in the earlier part of the war, she could have entered any Northern harbor, and laid under contribution or destroyed any of our seaboard cities.

In addition to all that has been already stated, it was expected of the Navy Department that naval expeditions, of a far more formidable character than any before fitted out in the United States, should be prepared to coöperate with land forces in recapturing the forts of the Southern coast, and on the lower Mississippi; and the character and magnitude of this work will be understood from what was done at Hilton Head, and New Orleans, and Mobile, and Charleston, and Wilmington, and also from the lesser countless fights with batteries on the Potomac, on the James, in the vicinity of Newbern, on the Ogeechee, and on Albemarle Sound, and indeed on almost every mile of navigable water in the South. Add to this the task of keeping open the Potomac, which required almost daily battle with the batteries on shore—batteries which were shifted from point to point, and which our small wooden ships could fight only at great disadvantage, but which it was absolutely necessary to fight and silence, or permit Washington and our army to be cut off from all communication with the sea. It is evident, then, that a force which could exclude the swift blockade-runners and shut in the formidable rebel iron-clads, must combine numbers, speed, and power to an extent before unknown in naval war. It is true that the Navy Department was not called upon to meet all these demands at once and at the very opening of the contest, but it is known now that the rebels, in the construction of their new navy, were in advance of our own Government; and it is a triumphant proof of the energy, the promptness, and sagacity, as well as of the boldness of those who controlled our naval affairs, that a new war engine was conceived and made ready, and brought to the spot just in time to save our navy, our cities, and our cause, and, by the defeat of the Merrimack, render impossible from that hour the construction of a rebel navy which we could not readily destroy. In addition to this service, it devolved upon the Navy Department to transport and protect the supplies for the armies operating along the seaboard, as well as the main body that at length marched under McClellan to Richmond.

Turning from this scene westward, another gigantic task for the Navy is revealed. The rebels had closed the Mississippi at Columbus, at Island No. 10, at Memphis, at Vicksburg, and Port Hudson, and not a throb of commercial life beat along the

great artery of the West. Forts Henry and Donelson closed the Tennessee and the Cumberland, so that no troops could be sent into Tennessee by water, nor could supplies readily reach them if they were marched by land. No wooden vessel could pass these batteries, unless it might at such peril as neither supplies nor men could be exposed to, and no land force unaided could capture and hold these strongholds of our foe. The problem presented to the Department then, was, how to prepare a naval force which, coöperating with an army, could capture these river forts, and open and hold open the Mississippi, and by clearing the Cumberland and Tennessee, prepare a highway by which our armies could establish themselves in the very citadel of the Confederacy, and assault the whole western line of the rebel defences. In addition to this, it was necessary to patrol the Ohio for its whole length of a thousand miles, to prevent raids into the border States and the burning of the river cities. To meet this problem of the West, some new form of iron-clad was needed, differing alike from the broadside ship and the turreted Monitor; and in another chapter this new product of American ingenuity will be particularly described.

Such were some of the more obvious difficulties at the beginning of the war, and such in its main features was the work which the Navy was called upon to do. It may be safely said that no such task was ever laid on any other Government. It would have taxed severely all the power of the French or English navy; in fact, we could not have fully met the exigency with one of these great navies at our command, because so few of the ships are adapted to our peculiar wants. It is very doubtful, to say the least, whether such a vessel as the *Warrior* could have stopped the *Merrimack*, much less the *Tennessee*, and such a navy would have supplied almost nothing suited to our river service. It was well, perhaps, that we had no Navy; but that throws into bolder relief the skill, the energy, the audacity, which some called rashness, that created the fleets by which the work was done.

The next chapter will treat of the means at the disposal of the Department in the beginning of the war.

CHAPTER VIII.

THE MEANS AT THE DISPOSAL OF THE NAVY DEPARTMENT WHEN THE WAR BEGAN.

HAVING presented, in the last chapter, the main features of the great and varied work demanded of the Navy, it is proper to show also the resources which were at hand for performing this task ; for only by comparing what was to be done with the means which the Navy Department could, in the outset, command, can the country judge whether its affairs were conducted with energy and skill.

It must be remembered that the line of battle stretched almost at once from Washington, down the Potomac, and along the whole Southern coast, and the banks of our Western rivers ; and the demand was immediate and urgent for a Navy to watch the long line of attack. What were the available means ? At the beginning of the war, the Navy consisted of twenty-six steamers, as follows :

Five screw frigates, of a little more than 3,000 tons each : the *Merimack*, *Wabash*, *Minnesota*, *Roanoke*, and *Colorado*.

One large screw-sloop, the *Niagara*, of 4,582 tons.

Six first-class screw-sloops, the *Richmond*, *Brooklyn*, *San Jacinto*, *Hartford*, *Pensacola*, and *Lancaster*, of about 2,000 tons each ; five second-class sloops, the *Pawnee*, *Iroquois*, *Wyoming*, *Mohican*, and *Dakota*, of about 1,000 tons each ; and of the third-class sloops, the *Narraganset* and *Seminole*, of about 850 tons each.

Four first-class side-wheel sloops : the *Susquehanna* and *Powhatan*, of about 2,400 tons each, the *Mississippi*, of about 1,700 tons, and the *Saranac*, of about 1,450 tons ; and of the small side-wheel steamers, the *Michigan*, *Saginaw*, and *Water-Witch*, of about 470 tons each. In all, twenty-six steamers.

As the Navy Department has been most fiercely and persistently attacked in regard to the speed of the vessels which have been constructed or purchased during the war, the following statement is given of the speed of the steamers which were built before the war; and in another chapter this will be compared with the rate of the vessels which have been built since the war began.

The statement of the speed of the vessels of the old Navy is quoted from a letter of the eminent ship-builder Donald McKay, adopted and sanctioned in the report of the Secretary of the Navy for 1864. It is as follows:

The maximum speeds of those vessels in smooth water, and for a short time, were as follows, in knots per hour, namely: Niagara, 10.9; Merrimack, Wabash, Minnesota, Roanoke, and Colorado, 9; Brooklyn, 9.2; San Jacinto, 8.8; Hartford and Lancaster, 9.5; Richmond, 9.5; Pawnee, 8; Iroquois, Wyoming, Mohican, and Dakota, 11.7; Narraganset and Seminole, 8; Susquehanna and Powhatan, 11; Mississippi, 8.7; Saranac, 9.2; Saginaw, 9; Water-Witch, 9; Michigan, 10.5. The Pensacola proved a total failure, and the machinery had to be removed.

Such was the steam Navy with which the Administration began the task of vigorously blockading three thousand six hundred miles of the most difficult coast in the world, against the fastest and best steamers that the shops of England could produce, built exclusively for speed and blockade-running at the particular localities. In addition to which, the oceans of the world were to be kept free of the steamers called Confederate cruisers, but which were in reality English pirates, being built in England, equipped with English guns, and manned by English crews, whose purpose was, not to fight our cruisers as war-vessels, but to plunder our sailing merchant-ships, and to keep out of the paths of our war-steamers. With the enormous advantage of having all the ports of the world, except those of the country they pretended to belong to, open to them for coaling, repair, refuge when closely pursued, and sale of the most valuable and less bulky portion of their plunder; and with the sympathy and active coöperation of the officials of those ports, and with the strong incentive of the free plunder of a large, rich, and defenceless commerce, without the slightest personal danger, even if captured—it is indeed miraculous they should have been able to do us the little injury they have.

Had all these vessels been in commission, and at the command of the Secretary, they would have constituted quite a formidable force for the commencement of operations. But as has already been stated in previous chapters, this small fleet was so disposed that but *one* efficient vessel was on our Northern coast when the conflict began. The natural effect of such circumstances would be to give the insurgents ample time to seize and establish themselves in the strongholds of the coast before any naval force could be collected. The following statement is from the report of the Secretary of the Navy for 1861 :

In order that the condition of the Navy on the 4th of March may be rightly understood, it will be well to state the position and character of each of the vessels at that date. The Home Squadron consisted of twelve vessels, and of these only four were in Northern ports, and available for service, viz. :

Name.	Class.	No. of guns.	Where stationed.
Pawnee.....	Screw-sloop.....	8	At Washington.
Crusader.....	Steamer.....	8	At New York.
Mohawk.....	Steamer.....	5	"
Supply.....	Storeship.....	4	"
Four vessels.....		25	

The remaining vessels of the squadron were stationed as follows :

Name.	Class.	No. of guns.	Where stationed.
Sabine.....	Frigate.....	50	Pensacola.
St. Louis.....	Sloop.....	20	"
Brooklyn.....	Steamer.....	25	"
Wyandot.....	Steamer.....	5	"
Macedonia.....	Sloop.....	22	Vera Cruz.
Cumberland.....	Sloop.....	24	} Returning from Vera Cruz.
Pocahontas.....	Steamer.....	5	
Powhatan.....	Steamer.....	11	
Eight vessels.....		162	

The Powhatan arrived at New York on the 12th of March, and sailed early in April for Fort Pickens. The Pocahontas reached Hampton Roads on the 12th of March, and the Cumberland on the 23d of the same month.

Of vessels on foreign stations, the following have returned in obedience to orders from the Department :

FROM THE MEDITERRANEAN.

Name.	Class.	No. of guns.	Date of arrival.
Richmond	Steam-sloop	16	July 3.
Susquehanna	Steam-sloop	15	June 6.
Iroquois	Steam-sloop	6	June 15.

FROM COAST OF AFRICA.

Name.	Class.	No. of guns.	Date of arrival.
Constellation	Sloop	22	September 28.
Portsmouth	Sloop	22	September 23.
Mohican	Steam-sloop	6	September 27.
Mystic	Steamer	5	October 7.
Sumter	Steamer	5	September 15.
San Jacinto	Steam-sloop	13	November 15.
Relief	Storeship	2	October 12.

FROM COAST OF BRAZIL.

Name.	Class.	No. of guns.	Date of arrival.
Congress	Frigate	50	August 12.
Seminole	Steam-sloop	5	July 6.

The following have not yet arrived :

FROM THE EAST INDIES.

Name.	Class.	No. of guns.	Date of arrival.
John Adams	Sloop.		
Hartford	Steam-sloop.		
Dakota	Steam-sloop.		

The following are to remain abroad :

Name.	Class.	No. of guns.	Where stationed.
Saratoga	Sloop	18	Coast of Africa.
Pulaski	Steamer	1	Coast of Brazil
Saginaw	Steamer	3	East Indies.

Add to these the vessels on the Pacific coast, the frigate *Niagara*, which was returning from Japan, and four tenders and storeships, and there was a total, as stated in the last report, of 42 vessels, carrying 555 guns, and about 7,600 men, in commission on the 4th of March last.

These official statements are a sufficient answer to all the charges of slowness and inefficiency, so thoughtlessly made by those totally ignorant of the facts, and who, in their impatience, demanded what nothing short of creative power could possibly accomplish.

The means at the disposal of the Government for the construction of such vessels as were needed were so limited as to present a very serious difficulty. There was not found at the navy-yards any adequate supply of suitable timber.

It had generally been supposed that large amounts of timber had been accumulated at the several yards, and that the stock was yearly increasing. The exact contrary was true, as if this insurrection had not only been contemplated for years, but as if steps had been actually taken long ago to cripple the naval power. It was found on investigation that not only had no additions been made to the stocks of timber on hand so as to increase the amount, but that these stocks had been diminished by neglect, and by omitting to purchase, until very little material remained from which new vessels could be constructed.

Obstacles scarcely less formidable were found in the condition of the workshops. These difficulties are well presented by Donald McKay in the following statement :

The means at the command of the Administration for building a steam navy to achieve the herculean task just indicated, were about two dozen machine-shops, great and small, distributed from Maine to Maryland, many of them very small, and without the tools, workmen, or skill requisite for the production of marine machinery. The first-class shops did not exceed eight in number. But the entire force of those shops could not be commanded by the Navy Department for the construction of new machinery. The War Department also drew largely on their resources for transport steamers, while the locomotive and tool-making shops found it utterly impossible to meet the demand upon them. Neither was there sufficient raw material in the country for the large and sudden demand; the iron, copper, tin, and coal had to be mined and manufactured. Hundreds of steamers, hundreds of locomotives, shops full of tools, tens of thousands of tons of metal were called for instantly, and there was nothing on hand to answer the call.

War-steamers cannot be built in a day. Inexperienced labor cannot be converted into skilled mechanics in a day. The prices of machinery rose immensely, the pay of the mechanics and the cost of material reached a point far above what they were worth, except from the factitious cause of the suddenness of the demand. The result was felt in the poor materials and poorer workmanship with which the machinery was made. Any kind of material, and the most unskilled labor, had to be brought

into use, and all this time the amount of even that labor was consequently diminishing by the absorption of men into the military service.

In view of these startling facts, it becomes evident that our national fleet ought to be immediately and largely increased, so as to be prepared for any emergency. Such as our Navy is at the present moment, it ranks hardly with second-rate European powers, and it is entirely insufficient to protect our trade and to uphold the dignity of our flag. There is no reason why we should not have a fleet as powerful as that of England or France. We have the money, the materials and artisans necessary to build a first-class fleet, and the best sailors to man it.

It would be easy for us to build in one year a fleet of five hundred to six hundred men-of-war ships, from a gunboat up to the largest class of iron-cased frigates. It is a well-known fact that we built in one year the astonishing number of two thousand and thirty-four vessels and steamers of all classes, measuring together 583,450 tons. A large number of these vessels were as large as the biggest class of frigates hitherto constructed. What we have done once, we may do over again; and working at the same rate, we would be able, alone in our merchants' yards, to turn out in one year five hundred and eighty-three ships, of one thousand tons each. In our six navy-yards, where the choicest materials are stocked for building a fleet of one hundred ships, sixty more men-of-war ships might be built in one year, making a total of six hundred and forty-three men-of-war ships of all classes, varying in their armament from three to sixty guns. More than a hundred of our greatest engineering firms would complete all the machinery necessary to be put in these ships in less than a year. Our capabilities and facilities of building ships have not in the least suffered by the loss of the seceded States. They never were ship-building States, and as late as 1860 they only built (combined) one full-rigged ship, while the Northern States built one hundred and ten ships of the same description. That is to say, in plain words, all the seceded States combined did not build even one per cent. of the sea-going ships built in the United States.

It is true on a very urgent occasion, in a great emergency, our country could largely increase her Navy, in a very few months, with very powerful descriptions of vessels, if they would proceed as follows: Cut down all our line-of-battle ships one or two decks, case them with five-inch iron plates, put a battery of thirty to forty guns of the heaviest calibre on board of them, and moor them across the entrance of our harbors. Plate our heavy frigates with shell-proof iron plates, and, to make up for the additional weight put into them, do away with their armament on the upper deck. Transform one hundred of our best sea-

going merchant steamers into so many frigates, sloops, dispatch and gunboats, of a speed superior to any men-of-war ships yet produced.

Among our large clipper-ships and traders more than five hundred may be found that are capable to be transformed into so many efficient sailing sloops and frigates. Their length varies from two hundred to three hundred feet, their breadth from forty to fifty-two feet; and whenever they are cut one deck, or their decks are lowered, will be found capable of carrying an armament varying from twenty to fifty heavy guns, according to their respective capacity. Twenty or thirty of our largest clipper-ships might very well be transformed into powerful screw-frigates; as, for instance, the *Great Republic*, which exceeds in her dimensions the largest English 50-gun frigates, while her shape for speed is incomparably superior. The scantling of all these ships is well known to be larger than that of the best and strongest men-of-war ships of our Navy.

Among the barks and brigs there are certainly four hundred to five hundred capable of receiving an armament of from eight to twenty guns, and more than a thousand of our large coasting schooners that have a breadth of twenty-eight to thirty feet and over, and a form never surpassed for speed, can, in a few weeks, be transformed into men-of-war schooners, armed with one pivot gun of the heaviest description in the middle, and two to four 32-pounders at the ends. These vessels have a very large stability, and the scantling of their timbers, etc., is by twenty per cent. heavier than that of the common men-of-war schooners.

This fleet, of about two thousand vessels-of-war, can (working with all the natural energy of our nation) be turned out in less time than four to six months, and it would be sufficient to protect our coast and meet the first storm. Time would so be gained to build a fleet fit to represent our great nation, and to make our flag once more respected in all seas of the globe.

But the time is pressing, our country is surrounded by dangers on all sides, and it becomes the imperative duty of our Government and people to act with the greatest energy without delay. The times are gone when Europe could be frightened by thundering newspaper articles and the hollow brag of ambitious politicians; we have to show now that we know how to handle engines of war, and to stand a hail of shells and balls.

A powerful fleet is the best guaranty of peace for a great maritime nation; of the truth of this principle England, whose motto is "Free trade and peace with all nations," is the most striking example.

Yours truly,

DONALD MCKAY.

In addition to all this, the Department was still further perplexed and endangered by the disloyalty of so many officers of the Navy, that it knew not whom it could safely trust. In his first report, July 4, 1861, the Secretary uses the following language :

Demoralization prevailed among the officers, many of whom, occupying the most responsible positions, betrayed symptoms of that infidelity which has dishonored the service. But while so many officers were unfaithful, the crews, to their honor be it recorded, were true and reliable, and have maintained, through every trial and under all circumstances, their devotion to the Union and the flag. Unfortunately, however, few comparatively of these gallant men were within the call of the Department at that eventful period. They, as well as the ships, were abroad.

From the 4th of March, 1861, to the 4th of July of the same year, the Secretary states that two hundred and fifty-nine officers of the Navy either resigned or were dismissed from the service, and on this account many vessels were sent to sea without a full complement of officers. The spirit of the Department on this subject is well set forth in the following letter, which explains itself:

NAVY DEPARTMENT, *July 15, 1861.*

SIR: I duly received the letter of Midshipman Watson, requesting an "order to some foreign station, or any place where I [he] will not be brought in conflict with my friends and relations in the South;" and also the letter of J. L. Harrison, requesting that he "may be relieved from duty on board this ship [the Richmond], and ordered where I [he] will not be called upon to act against my personal feelings." Each of these letters is forwarded by you with the recommendation that "the application be complied with for the reasons assigned, and that another midshipman be ordered." As I do not doubt your own loyalty and fidelity, I cannot permit the opportunity to pass without expressing my disapproval of such recommendations and indorsements. I especially object to your reasons as incompatible with a profession that is national, and in conflict with the enduring welfare of the country. In the request of these young gentlemen may be seen the germinating element of that denationalizing sentiment which has wrought incalculable evil to our country.

A great conspiracy has been formed against that Government which it is the duty of all to support, and which naval officers have avowedly

dedicated their lives to sustain; but because some of their relatives or friends are complicated, or from personal feelings, there is a reluctance on the part of some of the profession to stand by their country, when their services are most required. These young gentlemen have been inspired with these sectional and erroneous opinions by false theories, and it is not perhaps strange when their commanding officer encourages them in the error, by recommending the Department to yield to it, and asking the Secretary to provide a substitute to execute these duties which they are unwilling to discharge.

Why should there be a discrimination between these young gentlemen and other midshipmen in the performance of a national and professional duty? Those whom they would substitute belong, like themselves, to a common country, and are to meet and suppress an insurrection against a Government to which every man of the profession owes a common allegiance.

Were your recommendation to be a principle of action, only the officers of one portion of the Union would be required to sustain the Government and country against a great conspiracy, while another section would be exempted. The effects of such a rule would be to generate and perpetuate sectional difficulty and animosity, whereas we should all be united in suppressing hostility or resistance to the Government and the flag. None should shrink from this duty; none should be encouraged to shrink from it; none should receive recommendations to evade the high obligations which all, and especially all naval officers, owe to that Government which has educated and nourished them, and to whose support they have pledged their fidelity.

It is the duty of all to encourage a more devoted nationality, and to discountenance the prevalent error among a sectional class, that there is a higher political allegiance than that which is due to their country. A naval officer can have no higher duty in the line of his profession than to oppose the enemies of his country, whether foreign or domestic. He should never seek to avoid or evade that duty from sectional or personal considerations, nor should he, by recommendations or example, be encouraged to evade it. The lessons of history, which teach that love of country should be superior to selfish considerations, will have been lost upon young American officers, if their superiors recommend that, from "personal feeling" or a contingent apprehension of encountering disloyal relatives, they be relieved from their obligations to abide by their country in the hour of peril in any post that may be assigned them.

Very respectfully, your obedient servant,

GIDEON WELLES.

Capt. JOHN POPE, Commanding U. S. ship Richmond, New York.

Such, in general, was the condition of affairs in the Navy and in the country when Secretary Welles was placed at the head of the Navy Department. In July, 1861, the office of Assistant Secretary of the Navy was created. To this office Captain G. V. Fox was soon after appointed. And now if the country will take the insignificant force at command when the war began, and compare that with the vast and various work performed, and with the nearly seven hundred ships at the close of the war, it cannot fail to see that such a grand result could only have been reached by untiring industry and by a wide and clear comprehension of the whole field of action, and by consummate sagacity and skill. The work actually done is an impossible achievement, except by talent and executive ability of the very highest order. The first step was to increase the power of the Navy, and the measures adopted for this purpose will form the subject of the next chapter.

CHAPTER IX.

THE FIRST MEASURES ADOPTED FOR THE INCREASE OF THE NAVY.

THE facts already presented in regard to our navy-yards and machine-shops show very clearly that the Department could not depend upon them to supply its immediate wants. Even had suitable materials and machinery been at hand, they would have availed nothing for the first emergency. It is not the work of a few weeks, or a few months even, to construct an efficient war-ship, and the safety of the country demanded a fleet in the very first weeks of the rebellion.

Evidently there was but one course even possible for the Department. It was necessary either to purchase vessels wherever they could be obtained, or to fight the battle without ships. Nor did the case admit of any delay. Then, for the first time, was clearly seen the true national importance of that great commercial navy which private enterprise had created. The fleet which had been built for peace was found to be also efficient for war. In that squadron of commerce were some of the fastest steamers in the world—staunch, sea-going vessels, and capable of bearing a formidable armament. Measures were immediately taken to purchase such of these steamers as were adapted to the service required.

As was perfectly natural, the Secretary turned first of all to the officers of the Navy as the most suitable persons to judge of the character of these ships, and whether they could be successfully used as vessels-of-war. The step was taken when all direct communication was cut off between Washington and the Northern cities. A naval officer was dispatched to New York with orders to make the needed arrangements. It was hoped

that he would find a passage through the enemy's lines ; but twenty-four hours after his departure a telegram was received from him dated at Wheeling, he having been compelled to cross the mountains and go round by the Ohio River and one of the Northern routes, in order to reach New York. This is only an example of the countless embarrassments under which the Government labored during the first months of the rebellion, and which should be duly considered in judging of the efficiency of the Administration.

As this purchase of vessels involved the expenditure of a very large amount of money, justice to the Navy Department requires that these negotiations and the measures that were adopted to protect the interests of the Government should be presented somewhat in detail. The following orders, addressed to the officers in command of the navy-yards at Boston, New York, and Philadelphia, will explain themselves, and show how the Secretary proceeded in this important matter :

NAVY DEPARTMENT, *April 21, 1861.*

Commodore SAMUEL L. BREESE, *Navy-Yard, New York :*

SIR : By order of the President of the United States you will forthwith procure ten steamers capable of mounting a 9-inch pivot-gun, with light draught, about nine or twelve feet, having particular reference to strength and speed. You will consult with Commodore Foote, the naval constructor, and such other persons as are capable of giving information and advice. Charter on the best terms possible for three months, with the option of the Government purchasing them within that time at a stipulated price ; these vessels to be immediately removed to the navy or private yards, with the necessary alterations and equipments to render them efficient for the service required.

I am, respectfully, your obedient servant,

GIDEON WELLES, *Secretary of the Navy.*

Captain SAMUEL F. DU PONT, *Navy-Yard, Philadelphia :*

SIR : By order of the President of the United States you will forthwith procure five steamers capable of mounting a 9-inch pivot-gun, with light draught, about nine or twelve feet, having particular reference to strength and speed. You will consult with the naval constructor and such other officers and persons as are capable of giving information and advice. Charter on the best terms possible for three months, with the

option of the Government purchasing them within that time at a stipulated price. These vessels to be immediately removed to the navy or private yards, with the necessary alterations and equipments to render them efficient for the service required.

I am, sir, respectfully, your obedient servant,

GIDEON WELLES, *Secretary of the Navy.*

A similar order was addressed to Commander William L. Hudson, in charge of the navy-yard at Boston.

These orders, as will be seen, authorized the chartering of twenty steamers for three months, with the privilege of purchasing at a stipulated price. The matter was intrusted to experienced officers, and the Government was protected by the privilege of purchase at a price stipulated beforehand. This, at first, seemed to be the best possible arrangement for the Government, because it was necessary to submit every vessel to the inspection and judgment of a naval officer. These officers, however, soon felt that such duties lay without the sphere of their profession; that however skilful they might be in perceiving the good or bad qualities of a ship, they were not merchants, and they desired that the *purchase* of vessels might be committed to men better acquainted with the customs and laws of traffic. It was thought that experts in the market might obtain more favorable terms for the Government than men unskilled in trade.

On the 22d of April it was thought best so to modify the original orders for purchase as to place no restrictions upon the size of the vessels, and directing that any steamers should be obtained adapted to the purpose, but that special reference must be had to *efficiency, speed, and sea qualifications*, adding, that these qualities are *indispensable*.

Such orders, placed for execution in the hands of naval officers of experience and skill, show how prompt the action of the Department was in securing the best and fastest vessels in our commercial navy.

Soon after, on the 23d of April, the commander of the navy-yard at New York was directed to consult with "Governor E. D. Morgan, or, in his absence, with Mr. Geo. D. Morgan, and with Messrs Wm. Evarts, R. M. Blatchford, and M. H. Grinnell, a committee of the citizens of New York, who are hereby

empowered to act for this Department in this crisis." By this order the Navy Department brought to its aid, in procuring ships, some of the most eminent and trusted business men of New York.

At this time the most intense anxiety prevailed in the large cities in regard to the increase of the Navy, and the protection of our commerce. The following letters will show what measures leading men desired to adopt, and how the Department proposed to meet the necessities of the time :

OFFICE BOARD OF TRADE, BOSTON, *April 20, 1861.*

Hon. GIDEON WELLES, Secretary of the Navy, Washington, D. C. :

SIR : I have the honor to transmit a copy of resolutions unanimously passed at a special meeting of the government of this Board, on the 18th inst. I am, sir, with sentiments of high consideration,

Your obedient servant,

JAMES SABINE, *Secretary.*

Resolved, That this Body regard this proposition, published by a member of this Board, Mr. R. B. Forbes, in the papers of the day, and hereunto appended, as necessary and practicable, and that this association will give the merchants and master mariners of Massachusetts every aid in its power in the contemplated organization ; and that the aid and the countenance of the State is hereby earnestly invoked.

Resolved, That this Association forward herewith a copy of these resolutions to the Executive of the State, and to the Secretary of the Navy and the Secretary of State, at Washington.

BOSTON, *April 25, 1861.*

Hon. GIDEON WELLES, Secretary of the Navy, Washington, D. C. :

Whereas, The system of building ships-of-war by private contract has suffered by being made subservient to jobbing and to partisan favoritism ; but under proper guards is probably cheapest and most conducive to progress in the course of naval construction ; and

Whereas, It is believed that Boston can, in this emergency, turn out just such steamers as the Government want, in half the time, and at less cost, than those built in the navy-yards ; and

Whereas, It is now proposed to build a model light-draught sloop-of-war, ready for her armament, or one or two steam gunboats, and to offer the same to the Government at actual cost, with six per cent. interest—

Therefore, The undersigned, a committee of Boston merchants, empowered so to do, at a meeting held at the Boston Merchants' Exchange,

April 22, 1861, do hereby respectfully invite the attention of the Hon. Gideon Welles, Secretary of the Navy, to the above consideration, and solicit his sanction to the undertaking proposed.

Your obedient servants,

(Signed)

R. B. FORBES,

WM. ROPES,

LEWIS W. TAPPAN,

THEOPHILUS PARSONS,

Committee.

NAVY DEPARTMENT, *April 27, 1861.*

Captain Wm. L. HUDSON, Commandant Navy-yard, Boston, Mass. :

SIR: The Department has not had the pleasure of hearing from you since it authorized the procurement of five steamers for immediate service, and, of course, is uninformed as to the progress you have made. It is hoped, however, that there has been a vigorous and efficient response.

The Department has information from ex-Governor Boutwell, who has been deputed by Governor Andrew, of Massachusetts, that there is a disposition in Boston to raise an auxiliary navy or coast guard, for the protection of commerce, and to assist in carrying into effect the blockade of the ports of those States that are waging war on the Federal Government. Although this project has not been communicated by his excellency Governor Andrew, nor by ex-Governor Boutwell to this Department, it has been submitted by a gentleman who has been authorized by the latter to communicate it. It has also received a letter from the Board of Trade, and also from a committee of Boston gentlemen, of which Mr. R. B. Forbes is chairman, having in view this object, and with it the construction of one or more vessels.

Whatever may be the capabilities of the ship-yards, and the efforts of the enterprising merchants and builders of Boston, they will bear in mind that our immediate wants do not allow us to wait for vessels to be constructed. If the gentlemen have confidence that they can build vessels of a superior class, it is hoped they also have sufficient confidence and reliance in themselves to go forward, and trust to their being purchased by the Government after they are built. We now desire to obtain and equip, at the earliest moment, good and efficient steamers, having in view speed and strength, to meet the existing emergency.

I communicate these views now, in detail, to you, in the pressure of business, to save time and numerous answers. Any suggestions you may make, or propositions receive from Mr. Forbes, you will please communicate. Their efforts and patriotic zeal, and that of Governor

Andrew, are highly appreciated, and it is gratifying to the Department to have their active coöperation in this emergency, so interesting to the whole country.

I am, very respectfully, your obedient servant,
(Signed) GIDEON WELLES, *Secretary of the Navy.*

While the Secretary intimates his willingness to purchase vessels when *finished*, he states that the exigencies of the Government require that vessels should be obtained at once, and that this could be done only by purchasing ships already built, and which could be promptly fitted for service.

Time has shown that the Department availed itself promptly of the only means by which the country could have been saved. By the well-known system of trade in the great markets, negotiations for the transfer of important property are not carried on directly between the holder of the property and those who wish to buy, but between a broker, acting for the parties, and this broker receives a stipulated commission from the seller. It was found that the business of purchasing vessels for the United States was so managed, that the Government sometimes paid two commissions, and that, in some cases, these commissions had also been above the market rates. After consultation with those qualified to advise, and with the express sanction of the President, it was determined to procure the services of some competent and reliable man, who would agree to devote his whole time to the procuring and fitting out of ships, and who should receive nothing from the Government, and from the seller only the regular commission established by the New York Board of Trade. This would bring the whole transaction within the common and recognized laws of trade, and would relieve the Department from the liability of any improper charge for commissions, and of extravagant prices for vessels which might be bought.

In pursuance of this plan, the Department applied to Mr. George D. Morgan, of New York, a gentleman of well-known character and ability, and of large experience as a merchant. He acceded to the wishes of the Department, and relinquishing a lucrative business which would have yielded him more profit than the amount of his commissions, entered upon his work.

The naval constructor and an experienced engineer were then associated with Mr. Morgan. These two officers examined beforehand every vessel which it was proposed to buy. The naval constructor could judge of the character of the vessel, the engineer formed an opinion of the engine, and together they made an appraisal of the ship, which was submitted confidentially to Mr. Morgan, who was not permitted to pay more for any vessel than the price set upon her by the examiners and appraisers of the Government.

Through this arrangement the Department was enabled to obtain many of the fastest and best steamers in the mercantile navy, and on terms rather within than exceeding the usual rates of the market. From this source the Department derived the means both of establishing the blockade and of meeting the vast demand of the Army for transportation of troops and supplies. Many of these steamers, when armed, were very formidable war-ships. Some of them could carry with safety eight 9-inch guns, while small, swift vessels armed with a 100-pounder rifle, were the terror of the blockade-runners of England.

The efficiency of this Navy, thus extemporized from merchant-ships, has been largely underrated, because opinions have been formed without considering that the method of arming our ships is both American and peculiar. No correct idea can be formed of the actual force of an American ship from the number of guns she mounts. It is by no means certain that a vessel with one gun would be overmatched by another merely because she is armed with ten. At the commencement of the war a 50-pounder rifle was the heaviest cannon mounted on any French war-ship, and the English relied upon the smooth-bore 68-pounder as their most efficient gun; while our own small gunboats carried a 100-pounder rifle, and some of our second-rate sloops mounted a 150-pounder rifle or an 11-inch gun, and sometimes both.

The character of the armament of our ships is an original American idea, and is a distinguishing and most important feature of the Navy. A merchant-vessel that could carry one 11-inch pivot-gun, or a heavy rifle, would not be a pleasant antagonist for a ship mounting a whole broadside of the light cannon of the old style of armament.

As to the discrimination and care used, and the efficiency of the vessels purchased, the statement is made on the direct authority of Admiral Porter, that the twenty-one mortar-vessels under his command endured the severe service with almost no apparent injury. The number of discharges from these heavy mortars averaged fifteen hundred to each vessel, and yet none of them were shaken so as to leak, and at the close of the war they were sold for nearly as much as they originally cost.

The following extract from the Secretary's report for 1861 presents his own account of this important matter :

The public vessels and the public yards, in their capacity of construction and repair, were, however, totally inadequate to the demands that are now pressing on this branch of the Government, and the Department was compelled to resort to the commercial marine to make good the deficiency. Vessels of every class and description were promptly tendered by sellers and their agents, who, in many instances, became dissatisfied when their offers were not accepted.

This new necessity of the Government, involving a large expenditure, and the purchase of suitable vessels, imposed an important responsibility ; and the task of making suitable arrangements to insure the prompt and systematic purchase, on the best and most reasonable terms for the Government, of a large number of vessels most suitable for its use, was attended by peculiar difficulties, and received mature consideration. The purchase might be made directly by the Department, or by boards of officers under its control at the principal ports where the vessels were to be bought, and especially at the great central point of supply for such a demand, the port of New York.

But to both these methods of procedure the briefest trial disclosed serious objections. It was manifest from the first that the Department, charged suddenly with the organization and superintendence of new and arduous naval operations on a large scale, in addition to its current business, could not possibly itself devote to the numerous details of each case of purchase, the time and attention needful fully to protect the interests of the Government. It was equally clear that boards of officers, acting in a mere mercantile capacity, new to them, and for which they had neither been practically trained nor professionally commissioned, would be subjected to great embarrassment and disadvantage in their dealings with sellers of ships and professional ship-brokers, in a market suddenly pressed by a heavy and peremptory demand. Yet the Depart-

ment could rely, and it did rely, with the fullest confidence upon the professional judgment and ability of its ordnance officers, naval constructors, and engineers, all acting under the responsibility of their commissions, to investigate and determine the whole question of the adaptation, in all respects, of each ship offered, and of its capacity to be by alteration fully adapted to perform the particular service required by the Government. This work, with the corresponding authority of selection and rejection of all vessels, was therefore exclusively committed to boards consisting each of an experienced naval constructor and engineer and an ordnance officer, convened and stationed for the purpose at New York, and the other principal cities. The mere mercantile part of the business—the making of the best bargains possible for the Government in each case, with the care of averting all intervention of third parties, which might embarrass the attainment of that result—was considered by the Government to be placed most properly in the hands of a mercantile agency of a high and established character for integrity, experience, and capacity. Obvious reasons, including the consideration that it is individual responsibility which is always felt most keenly, and that several agents, all acting separately for the Government at the same places, would necessarily compete with each other to its disadvantage in the market, indicated that this agency should be tendered to a single, properly qualified individual, upon the distinct understanding that he should devote his whole time, attention, and ability to the work; that he should in no case make any charge against the Government for his service; that he should deal always directly and exclusively with the owners of the vessels purchased, thus permitting no brokerage fees, or agents' commissions, between himself and the owners; and that, finally, his own commission, payable always by the seller, should in no case exceed the regular mercantile percentage fixed by the Chamber of Commerce of New York, and established by the custom of merchants in that city as the rightful and legal rate of remuneration for such services rendered by any person acting between the sellers and purchasers of vessels.

The experiment thus made by the Navy Department was one of great national importance, and every American has reason to rejoice at the result. It has shown what abundant resources we have ever at hand in our merchant steamers to meet such an emergency as the rebellion created, and that under an efficient administration these can be called to the aid of the Government almost as quickly as if they belonged to the na-

tional Navy. They were admirably fitted for the intended purpose; they were more efficient blockaders than our regular war-vessels; they were formidable antagonists because of their heavy armament; but notwithstanding this, the nation should not deceive itself with the idea that it would be equally safe to depend upon this class of vessels in case of a foreign war. This subject will be discussed in another chapter.

CHAPTER X.

THE IDEAS WHICH GOVERNED THE DEPARTMENT IN THE CONSTRUCTION OF NEW VESSELS.

IN order to judge aright the policy of the Department in the construction of new vessels, it is necessary not only to inquire what the precise want of the country then was, but whether this policy was shaped by a definite American idea concerning ships and guns, and naval war. This subject was touched upon in an opening chapter, with the intention of returning to it again.

It is an important thought, and one which, in estimating the value of the Navy, has not received due attention, that previous to the rebellion it was the best exponent of our national power, the expression of a true national thought and feeling. With the exception of the little standing Army, that attracted no attention, we had only State troops, where we had any soldiers, who expected to answer any call from the General Government only through the State authority; but in the Navy there were no State ships, nor sailors, nor State flags; it was "the American Navy." There the true national feeling was cherished in its strength, when it was weak or discarded elsewhere; and particularly was this true of the seamen, a fact to be remembered to their eternal honor. When the officers of Southern birth or proclivities, who had come under the influence of their leaders, abandoned in large numbers the cause of their country, the common seamen, with very few exceptions, were true to the national sentiment, and faithful to the national flag. The Navy not only centred upon itself the national feeling, but it embodied the national thought.

When the American mind came to express itself in the

form of ships and guns, it was seen that it had not followed existing models, but had thought out some peculiar and original forms. Soon, when men spoke of an American ship, it was understood to be a vessel of distinctive character, and different from an English or any other ship. It was regarded as bearing the stamp of American character.

The American mind, however, from the first, was not working at random ; it was not making experiments here and there, which tended to no result, but, from first to last, it was governed by a few definite ideas and well-settled principles ; and the Department, in the construction of the new Navy, followed the traditional policy of the nation, but made some novel and very startling applications of leading principles and ideas.

A very brief sketch of the rise and progress of the Navy will place the action of the Department in its proper light. A leading characteristic of the American mind is its impatience of many successive operations to produce a given effect. It aims to reach its object by a single step. It seeks to concentrate power upon a single point, to combine many forces in one, and by a single blow produce the effect of all. It brings the greatest possible force to bear on a single purpose, and reaches that purpose in the shortest possible time. In every branch of our industry we find examples of the manner in which this central idea has given direction to American thought. Instead of the slow process of hand-work, the American will have a machine to gin his cotton, and with it he changes the aspect and relations of the world. He will not only have a printing-press worked by steam, instead of the hand, but he constructs a cylinder press ; and, not content with that, he invents a Hoe press, a *lightning* press, that throws off its thousands of sheets per hour. He not only uses the ship that sails *with* the wind and tide, but he will construct a steamship, that goes with equal speed *against* the wind and tide. He cannot wait for the slow processes of scythe and sickle, but concentrates the power of twenty men into a single machine. He cannot endure that his message should travel only forty miles per hour, and so he invents the telegraph, and flashes on his thought hundreds of miles in a moment. Instead of waiting for the slow stitching of weary hands, he *condenses* the power and speed of fifty needles

into one, and drives that one by steam. When he builds a war-ship, he aims to give her the highest speed consistent with his purpose, and for her armament he concentrates the force of a broadside into one big gun; and, instead of making fifty small holes or indentations, he crushes in the side of his enemy by one smashing shot, and compels him to surrender or sends him to the bottom. The Navy, therefore, is the creation of a leading thought in the American mind, and it will be interesting to trace the influence of this thought in the various stages of construction.

At the time of the Revolution, we had, of course, no Navy, and the few small commercial vessels of the colonies presented nothing peculiar. The thought of the people had been occupied with the grave political and moral questions connected with the separation from England. The American mind had not yet been directed to the importance of manufactures or commerce. In fact, both were purposely made impossible for the colonists by the restrictive laws of England. But in the very first war-vessels built after the close of the war, the true distinctive American idea began to be manifested. The idea was, to bring the power of a line-of-battle ship within the dimensions of a frigate. This was nearly accomplished by slightly increasing the size of the common frigate, and arming her with heavier guns, without changing her nominal rate. The manner in which this was carried out is shown in the size and armament of the frigates *Constitution* and *United States*. The frigate *Constitution* was launched in 1797; her length was 175 feet, her breadth of beam 43.6 in., and her tonnage, according to the old rates, 1,530 tons. The *United States* was launched in 1797; her length was 175 feet, her breadth of beam 43.6 in., and her tonnage 1,530.

In order to compare the American with the British ship of the same rate, it is only necessary to state the weight of their broadsides, which were as follows:

American frigate <i>United States</i>	864 lbs.
American frigate <i>Constitution</i>	768 lbs.
British frigate <i>Macedonian</i>	528 lbs.
British frigate <i>Guerriere</i>	517 lbs.

It will be seen at a glance, from these statements, that the

registered rates of our ships gave no indication of their comparative force. The Americans had so far carried out their idea of the concentration of power, that their frigate rated as a forty-four was very nearly the equal of a British line-of-battle ship; and the result was, that when the *Guerriere*, a forty-four, was laid alongside the American forty-four, the *Constitution*, the British ship was demolished in fifteen minutes. Similar results followed, as is well known, in other actions; and though it was conceded that the rapidity of the American fire was generally greater than that of the English, still our almost unbroken success was mainly due to the superior weight of the American broadside.

The English historians have dwelt with great satisfaction upon the disparity of force. They declare that it removes all the sting of defeat. They insist that it was perfectly natural, even inevitable, that, under such circumstances, the British ships should be captured or sunk. This was, and is, precisely the American opinion. This was just the result they anticipated, and they built their frigates with this very object in view. There are two aspects to this subject, one of which all English writers seem to have overlooked. In one view, it was a battle between ship and ship, and it was no disgrace to the English commanders to yield to superior force. But it was also a fight between the two nations, and certainly it was a remarkable fact, and highly honorable to the Americans, that their young nation, in the first hours of its life, should have produced ships that carried dismay to every English heart, and conquered, on her own element, the haughty mistress of the seas. In the battle between the nations, England was met by superior weapons, and was ingloriously defeated.

Should such a ship as our *Miantonomoh* meet an English broadside iron-clad, and crush in her sides with 15-inch shot, as she easily could, it would be quite natural, even necessary, that the British ship should surrender or sink. There might be no occasion to charge the English commander with want of courage or skill, but it would be discreditable and humbling to Great Britain that her boasted national ships, to which she had trusted her safety and honor, should be easily demolished by an American Monitor. It would not lessen the national shame to

assert and prove that the British iron-clad was no match for the Yankee ship. That is the precise result at which we are aiming.

To present more fully the difference between the English and American armament, the following table is extracted from James's "Naval History," showing the weight of the broadside of the classes of ships named :

Gun ship.	French.	English.
120	1,268	1,379.
110	1,180	1,278.
80	996	1,079.
74	838	907.
64	510	552.

The heaviest guns in these armaments were 36-pounders, on the main deck.

James's history was published in 1822. His rates have been quoted by authorities since as correct, and yet we find that he states that the weight of the Macedonian's broadside was 549 pounds at the time of her capture in 1812, and that the broadside of the Guerriere was 517 pounds. It will be seen that the United States frigate, rated as a forty-four, threw very nearly the same weight of metal at a broadside as the 74-gun ship of the English Navy, if James's figures are correct.

A second era in the construction of the American Navy began after the War of 1812, when the Government built several line-of-battle ships, following in the main the European model, retaining still, however, the heavy armament; and the vessels thus constructed were as much superior to the British vessels of the same rates as were our frigates to those of the same rate in the English Navy. In James's history is the following comparison between the English 80-gun ship and the American ship Franklin, rated as a seventy-four, and also carrying eighty guns :

ALBION.					FRANKLIN.				
	Guns.		Pounders.	Weight per gun.		Guns.		Pounders.	Weight per gun.
First deck.....	28	long	32	55	30	long	32	63	
Second "	28	"	18	42½	32	"	32	52	
Quarter deck...	6	"	12	34	2	"	32	53	
Forecastle	12	carronades	32	17½	18	carronades	32	19	
Poop.....	6	carronades	18	10½					
	80					82			

ALBION.		FRANKLIN.	
Weight of broadside..	982 lbs.	Weight of broadside...	1,312 lbs.
Crew.....	593	Crew.....	786
Size, tons.....	1,743	Size, tons.....	2,124
Length of the Franklin, as stated by James.....		197 feet.	
Extreme breadth.....		50 "	
First deck ports apart.....		8.6 "	
Height of " from water.....		4.7 "	
Draught of water abaft.....		24 "	

To these tables may properly be added the following statement of the battery of the Ohio. The Ohio rates as a 74-gun ship. Her length is 198 feet, and her breadth of beam 54 feet, 6 inches. The battery of this ship is shown by the following tables :

BATTERY OF THE OHIO—1846.

		Weight of broadside.		
Spar deck,	{ Twelve	32-pounds	of 42 cwt.	} 480 lbs.
	{ Four	32 "	of 57 "	
	{ Six	32 "	of 61 "	
Main deck,	{ Four	8-inch	of 53 "	} 576 lbs.
	{ Twenty-eight	32-pounds	of 61 "	
	{ Four	8-inch	of 63 "	
Lower deck,	{ Twenty-eight	42-pounds	of 71 "	} 716 lbs.
	{ Four	8-inch	of 63 "	
Total.				1,772.

The armament of an English 120-gun ship is stated by James (volume i., published in 1822) as follows :

32 36-pounds.	} Weight of broadside 1,373 lbs.
34 24-pounds.	
34 12-pounds.	
20 8-pounds.	

120

In round numbers, then, the broadside of the American 90-gun ship was heavier by 400 pounds than that of the English ship of 120 guns. Nor was this the only superiority. The largest gun *then* mounted on the English three-decker was a 36-pounder, while the Ohio carried 28 42-pounds and 8 8-inch guns, whose shot weighs 65 pounds.

In the form of the American line-of-battle ship there was

little or nothing peculiar ; but the armament was distinctively American. The 8-inch guns, the 42-pounders, and the superior weight of the broadside, gave the Ohio so great an advantage as to make it almost certain that a 100-gun ship of the old style, in a combat with her, would have been demolished as the *Guerriere* was by the *Constitution*. These line-of-battle ships, six in number, were, however, upon the whole, the most unsatisfactory vessels which have been constructed. They followed very closely in form the European model ; and the American mind does not, in such matters, work well in foreign harness. They were the first and the last of their class in our Navy, and are now useful only as storeships.

The next distinctive era in the progress of our Navy was that in which a new class of frigates was produced, which, more clearly than any thing which had preceded them, presented the distinctive American idea. They were such war-ships as the world had not seen before, and were destined, within their sphere, to revolutionize the naval architecture of the world. Already, indeed, the Americans, in their endeavor to produce ships of greater speed, had greatly modified the forms of our commercial vessels. The hull was much longer in proportion to breadth, the bow was sharper, and the stern was rounded, while the length of spars, and consequently the spread of canvas, was largely increased. With these modifications our sailing vessels, as well as our steamboats, had become the fastest in the world. These changes, so far as they were available, were adopted in the construction of the new American frigates.

In order to place the character of these vessels more clearly before the reader, the dimensions, tonnage, and weight of broadside, as stated by James, of a French 104-gun ship, and an English 90-gun ship, about the time of our Revolution, are here presented :

	Length of deck.	Breadth.	Weight of broadside.
French 104 guns.....	187 ft., 7½ in.	53 ft., 8½ in.	1,170 pounds.
English 90 guns.....	175 ft.	48 ft., 7½ in.	842 pounds.
The French ship measured 2,347 tons.			
The English " " 1,814 "			

By referring to tables previously given, it will be seen that the American frigates *Constitution* and *United States*, built just

after the war of the Revolution, were as large as the English 90-gun ship, and that the United States threw a heavier broadside.

In the light of these facts the change wrought in naval construction by the new American frigates will be clearly seen. They were the first built after the war of 1812-'15. The *Minnesota* may be regarded as a type of this class of ships, and her dimensions are as follows: length 269 feet; breadth 51 feet, 4 inches; tonnage 3,307 tons. She is, then, nearly 1,600 tons heavier than the English 90-gun ship was about the beginning of this century; she is 94 feet longer, and her weight of broadside is 2,406 pounds, or nearly three times that of the old British 90-gun ship, while she is also nearly 70 feet longer than our own line-of-battle ships built after the War of 1812.

The important points to be noticed here are the greater length of the ship in proportion to her breadth, the increase of the weight of the broadside in proportion to the tonnage, and the greater size of the shot. According to James, the largest gun on the English 120-gun ship of the old form was a 36-pounder. Our own line-of-battle ship, the *Franklin*, carried, as is stated, nothing heavier than 32-pounders. Our 90-gun ship, the *Ohio*, in 1845 was armed partly with 42-pounders, but they were carronades, and the idea of the heavy armament will appear very distinctly if, with these figures before us, we look at the size of the *Minnesota's* guns, as they were in 1863:

	Weight of shot.
1 150-pounder, rifle.....	150 lbs.
4 100-pounders, "	100 "
1 11-inch "	166 "
42 9-inch "	90 "

These statements show very clearly the direction in which the American mind was working. The object aimed at is plain; and the result was, a class of frigates more formidable than any other ships afloat. The manner in which the heavy guns of the *Kearsarge* shattered and sunk the *Alabama* shows how quickly the *Minnesota* could crush any wooden ship armed only with 32-pounder or 42-pounder guns, or even with a few 68-pounders, in addition to the general armament. A war with England, previous to the rebellion, would necessarily have re-

peated, on a larger scale and with more decisive effects, the triumphs of our first battles on the sea. The little Navy of the United States, as a whole, was doubtless no match for the immense fleets of England; but the Minnesota, or any other ship of her class and armament, would have captured any single wooden ship then in the British Navy. She would so far have overmatched an English line-of-battle ship as to have made the battle a useless waste of life.

This point had been reached by the United States in the construction of a Navy previous to the breaking out of the rebellion. Intent only on the pursuits of peace, the country felt no anxiety in regard to the increase of its naval power. For almost fifty years the Navy had had no opportunity of attracting attention by brilliant achievements. A generation had come upon the stage to whom its former renown was only a matter of history. Very little was known of its character, or the nature of its service, or of the stations of the ships; and it was perfectly easy, therefore, for the conspirators who controlled the Navy to scatter it abroad, and disarm the nation without exciting remark or suspicion. The condition of affairs in this respect has been already described, and mention has been made of the first measures adopted by the Department to extricate itself from its perilous position, through the extensive purchase of private vessels. This, as has been stated, was the only possible step which the Secretary could take with any reasonable hope of success; and it was accomplished, as has been shown, with remarkable promptitude, business tact, and economy for the Government. A blockade had been proclaimed, and a mere paper blockade would only have invited the trade of all nations to the rebel ports. These purchased vessels were stationed, as rapidly as possible, along the Southern coast. But these purchased ships, well suited as they were to the general purpose, by no means met the whole want of the country. It was not alone the outer, the sea-coast line, which was to be guarded, but the inner coast, the sounds, the inlets, and rivers. To complete and maintain this blockade, and thus cut off the rebel supplies, was evidently the first thing to be done. The operations of the Navy Department cannot be rightly judged without holding in view, not alone what it was desirable to do,

but what, at the time, it was possible to get done. It must also be remembered, that while many things pressed at once upon the Secretary, and all perhaps important, yet from his standpoint, and knowing what the public did not, he could see that some one thing should take precedence of all the rest, and the Department aimed ever to do the first thing first.

Having made his first purchases of vessels for the blockading squadron, the Secretary knew that the heavy frigates already named, and some steam-sloops, might be used to reduce some of the less formidable forts guarding the inlets and sounds, so soon as these ships could be collected from the distant points to which they had been scattered; and the first work of construction was the building of a fleet of small gunboats, of about five hundred tons' burden, to operate in the shallow waters of the Southern coast. Such was the necessity for these vessels, and such the foresight and decision of the Secretary, that twenty-three of this class were ordered in advance of the action of Congress; and when that body met in December, 1861, the Department was able to report that many of these gunboats were already in commission, and doing good service on the Southern coast. A brief statement of the character of these vessels will present once more very clearly the American idea of ships and their armament. Their dimensions were as follows: length, 165 ft., 6 in.; breadth, 28 feet; depth, 12 feet. They were schooner-rigged, and their maximum and contract speed was nine knots. Their armament consisted of one 11-inch pivot-gun; two 24-pounder howitzers, and one 20-pounder howitzer. Their measurement was, in round numbers, five hundred (500) tons.

The first point worthy of note, as illustrating the change which the Americans were working in naval architecture, is their length in proportion to their tonnage and diminished breadth. Our first frigates, as has been shown, were about the length of the old 80-gun ship, and their measurement about fifteen hundred (1,500) tons. The breadth of the frigates was a little more than fifty feet. But these small gunboats of only five hundred tons are only ten feet shorter than such frigates as the Constitution and the United States, while their breadth is only twenty-eight feet. They are nearly as long as the frigates

of 1812 with only one-third their tonnage, while they have only a trifle more than one-half their breadth.

This shows an entire change in the model of war-ships; but we see also that it is in conformity to a general idea that is a prevailing one in the construction of the Navy, and indeed of all American ships, the lengthening of the hull in proportion to the breadth. The next American characteristic is shown in the style of the armament. These small gunboats carry one pivot-gun, whose shot weighs 160 pounds. A comparison will show the practical effect of this new arrangement. This single 11-inch gun, and one of the 24-pounder howitzers, carry a weight of metal equal to the broadside of a 20-gun ship armed with 18-pounders. Nor is this all. While the gunboat might receive many broadsides from the 18-pounders without being sunk, a single shot from the 11-inch gun would be very likely to disable or sink a 20-gun ship of the old construction and armament. These little gunboats were really formidable vessels.

The country in its first alarm, and having then no clear conceptions of what was needed, or of what *could* be done, was anxious for many things, and also anxious that these many things should be immediately provided. The people demanded powerful, swift ocean cruisers, which should sweep the seas, forgetful of the important fact that such ships would require three years in the building, and even if already built they would not meet the exact want which was pressing the Government most severely then. Its first need was for blockading vessels, which were procured, as far as possible, by purchase; and its next, of gunboats for the shallow waters and rivers of the South, was provided for by the fleet of twenty-three, which were put in commission a few months only after the contracts were made.

To illustrate the object which American builders have held steadily in view, let it be supposed that such a gunboat as has been described, with her speed increased to fourteen knots (if that is possible), should meet even a line-of-battle ship armed only with 32-pounders and 32-pounder carronades—to say the very least, it is by no means certain that the large ship would be the victor. It is probably not practicable to give to a vessel of this small gunboat class the requisite speed; but a

small, swift vessel, carrying one heavy gun, can be built, and she would prove a very formidable foe to a ship much larger than herself if armed only with lighter guns.

By the promptness and energy with which the Department moved in carrying out these measures, before the close of the first year of its administration, it had placed on the Southern coast a fleet quite sufficient to establish a blockade which European Governments were compelled to recognize as valid. Of course it was very difficult, at first, so to close that long and double coast-line, that the vigilance, and skill, and persevering energy of neutral England could find no entrance, stimulated as she was by the hope of gain, and the desire to aid in our ruin; but every new ship we commissioned lessened somewhat her chances of success, and cut off some portion of the resources of the rebels. The fleet of English steamers supplying them with arms, clothing, food, and whatever else was required, and other English vessels floating the secession flag, destroying our peaceful ships, will appear in the future as the most disgraceful chapter of all her history. Nor do all the pleasant speeches which individual Englishmen or Americans have made, or may make, alter the smallest feature of the case. These pleasant-spoken gentlemen do not represent the real England with which we have to deal. Lord Palmerston was the true exponent of England.

The next step was to produce some new steamers of the Iroquois class, vessels of about one thousand tons' burden, and which were efficient ocean cruisers. Of these were the Kearsarge, the Oneida, the Wachusett, and Tuscarora. The value of these ships was triumphantly shown in the destruction of the Alabama, a battle which, in its influence upon European opinion and policy, was second only to the Monitor fight with the Merrimack. The dimensions of this class were as follows, omitting fractions, and taking the Kearsarge as a type: length, 200 feet; breadth, 33 feet; measurement, 1,031 tons; battery, two 11-inch guns, one 30-pounder rifle, four 32-pounders smooth bore. These vessels, for the purpose of saving time, were built from drawings and patterns already in the hands of the builders of those from which they were copied—ships that had been constructed previous to the war, and yet they exhibit very clearly



Illustration by M. B. Wolfson, U.S.N.

The Mary S. Elwell, U.S.N. (1870-1871) (U.S.N. 1870-1871)

the direction in which the American mind was working. These *gunboats* are a few feet longer than our old 74-gun ship, the Franklin, while they are also twenty-two feet narrower. The destruction of the Alabama is proof positive of the terrible efficiency of their armament, and it is more than probable that the Kearsarge with her 11-inch guns would destroy any wooden ship, however large, if armed only with 32-pounder and 42-pounder guns, and provided her speed were only equal to that of the Kearsarge.

These vessels were intended, not only for the service of the blockade, but for the pursuit and capture of the armed vessels which neutral England fitted out in her harbors, and manned with seamen and gunners from her own practice-ships; and while many Americans were denouncing the Department because it had furnished, as was said, no swift, efficient ships, the English papers ascribed the capture of their boasted Alabama to the superior speed and general efficiency of the Kearsarge—a very conclusive answer to the censure at home.

Some experiments which were made in the crooked and narrow channels of the Southern rivers showed conclusively that the screw-steamers were not the most efficient vessels for such a service, because they cannot run backward—they cannot advance and retire on the same line. They must turn round in order to withdraw; and to say nothing of the difficulty of doing this in a narrow channel, it is often very dangerous; as, for instance, when a vessel attacks a fort, and it becomes necessary to withdraw. In turning, the entire broadside would be exposed to the enemy's fire. The same would be true when a vessel, in the bend of a stream, comes unexpectedly upon a battery or fort.

In the early part of the war one of our screw-steamers was lost in this manner. She found herself suddenly under the fire of a battery in the bend of a river, and in endeavoring to turn she ran aground and was lost. If she could have backed out, she would have been saved. The Department next decided upon the construction of some side-wheel steamers; and the following were built: the Maratanza, Mahaska, Sebago, Octarora, Sonoma, Conemaugh, Tioga, Genesee, Miami, Paul Jones, Port Royal, and Cimarron, twelve in number, of about 850

tons each, and having a maximum speed of eleven knots per hour.

But even these did not meet all the requirements of the case, and another style of vessel was devised, still better adapted to the shallow and tortuous channels of the Southern waters. Both ends of these vessels were built alike, and their wheels and engines were so constructed that they could move backward or forward with equal facility. These were twenty-seven in number. They were of 974 tons' burden, and have a maximum speed of $14\frac{1}{2}$ knots per hour. Their names were, the Eutaw, the Sassacus, Wateree, Pawtuxet, Tallapoosa, Winooki, Mackinaw, Shamrock, Tallahoma, Tacony, Iosco, Agawam, Pontoosuc, Massasoit, Osceola, Mattobosett, Chickopee, Ascutney, Otsego, Metacomet, Chenango, Lenapee, Mendota, Mingo, Wyalusing, Pontiac, and Peoria. These were the gunboats known as "double-enders." To this class seven other larger and faster were added, the Winnipeg, Ashuelot, Muscota, Suwanee, Shamokin, Mohongo, and Monocacy, all of 1,030 tons each. These paddle-wheel gunboats have the light draught of eight feet, and were very heavily armed.

These were followed by another class, larger still, and designed for ocean cruisers, and it was intended to give them a speed equal to that of the *neutral* blockade-runners. The Lackawanna may perhaps be taken as a representative of this class, although she is a trifle larger than some of them. Her length is 237 feet; her breadth, 38 feet; her tonnage, 1,533 tons.

It will be seen that the change in model was still going on in the same direction, as appears by an example. The now historic flag-ship of Admiral Farragut, the Hartford, was of the following dimensions: length, 229 feet 9 inches; breadth, 44 feet; tonnage, in round numbers, 2,000 tons. With a tonnage of only 1,533 tons, the Lackawanna is 7 feet 3 inches longer than the Hartford, while at the same time she is six feet narrower.

The armament of this class of ships was as follows. The list, however, gives only a general idea of their guns, for they were not precisely the same on every vessel, and changes were made from time to time that were indicated by experience. The armament of the Lackawanna was as follows:

	Weight of shell.	Weight of shot.
One 150-pounder rifle, pivot.	146 pounds.	150 pounds.
One 50 " " "	40 "	50 "
Two 11-inch " " each	136 " each	166 "
Four 9 " broadside	73 "	90 "
Weight of broadside. shell	622 "	shot 712 "

If this battery is compared with that of vessels of an earlier date, it will be seen to be a very formidable one; and such an American war-ship, armed with such guns, placed alongside a frigate or line-of-battle ship built in the early part of the eighteenth century, is shown to be a new creation, the product of a new idea. The progress of what may be called American ideas in the form and armament of vessels is very clearly shown by a comparison between the old frigate *Constitution* and the *Lackawanna*. In two points they admit of this comparison, their tonnage and the weight of their broadside. The *Constitution* measured about 1,500 tons, the *Lackawanna* 1,533 tons. The broadside of the *Constitution* weighed 768 pounds, while that of the *Lackawanna* weighs 712 pounds. In burden and broadside, therefore, the two ships are nearly the same. But here the resemblance ends. The length of the old frigate was 175 feet, that of the new steam-sloop 237 feet; the breadth of the *Constitution* was 43 feet, 6 inches, that of the *Lackawanna* is 38 feet. So that while the modern vessel is 5 feet narrower than the pride of the old Navy ("Old Ironsides") was, she is, at the same time, 62 feet longer. These facts exhibit with great clearness the direction in which American thought has been working, and it will soon be shown that the limit was not reached with the *Lackawanna* class of steamers.

But it is in the armament that the American peculiarity is presented with greatest boldness. Scarcely a trace remains of the old ideas in the battery of the *Lackawanna*. Europe had never before seen such an armament. The new steam-sloop, with only eight guns, throws about the same weight of metal that the *Constitution* did with her fifty guns. The heaviest guns of the *Constitution* were 32-pounders, the lightest gun of the *Lackawanna* was in 1863 a 50-pounder; the broadside guns were 90-pounders; then there was one 150-pounder rifle, and last, two 166-pounder pivot-guns. To this must be added the

important fact that these were also shell-guns. Such a ship would demolish an old 100-gun ship almost at a broadside. The speed of these new ships was such as to vindicate both the wisdom of the Department in deciding upon their model and the skill and faithfulness of those by whom the hulls and the engines were built. The swiftest steamers that England could produce, when aiming only at speed, and carrying no battery, could seldom escape these new war-steamers, if the blockade-runner could be seen early enough in the day to permit a few hours' chase before it was dark.

The idea so prevalent, that our war-vessels were slow compared with the ships of England and France, had no foundation in fact. The contrary, indeed, was true. As an illustration of this, the writer was informed by Admiral Farragut that the main difficulty was, not that the English steamers were faster than our own, but to get sight of a blockade-runner long enough before night or far enough from a port to allow a chase. In confirmation of this fact, he related the following incident: A new blockade-runner had been built by Englishmen and sent out, which was said to have uncommon speed. An English officer said to Admiral Farragut that she could make twenty miles per hour. The admiral expressed his doubts of this, and also his belief that he would capture this British racer.

Shortly after, it was ascertained that this new *neutral* trader would soon be on our coast, and the captain of one of our gunboats asked permission of the admiral to take two guns out of his ship and go in pursuit of her. He was told to take out *four* guns. He did so, and stationed himself in her supposed track. He was soon fortunate enough to get sight of her under favorable circumstances, and after a chase of a few hours this pride and hope of the English builders and merchants was overhauled and captured by a Yankee gunboat.

At the very time when the impression was spread through the country that our Navy consisted only of slow and almost worthless ships, we had some of the fastest war-vessels afloat. In order fully to present the main features of the policy of the Department, it is necessary so far to anticipate the history of the iron-clads as to mention the attempt to construct a fleet of light-draught Monitors for service on the Southern rivers, inlets, and

sounds. After our Navy began its operations in the bays and estuaries of the South, and in the narrow and extremely crooked channels of its rivers, it was soon found that the light gunboats, which alone could navigate those waters, were unable to resist the forts and even the heavy field-batteries so easily planted along the shores, and which could also be readily transferred from point to point. How to meet this difficulty was a very serious question, for unless the Government could command these inlets, bays, and rivers, the rebellion could not be subdued, for the communications of the Army could not be kept open, and the country, therefore, could not be occupied.

After much anxious deliberation in regard to experiments in an unknown field, it was decided to try a class of vessels which had never been used, the light-draught Monitors. It was very clearly seen that if they should prove a success, they would meet the exact want of the Government, and it was thought wise that the trial should be made. The result of this experiment will be stated hereafter. It has been mentioned here merely to show that the Navy Department kept a watchful eye upon every feature of the contest, and was ever on the alert, anxiously considering what means were best adapted to meet the wants of the hour. It was constantly called upon to meet exigencies before unknown in naval war. New weapons were employed by the rebels, and new methods of attack. These novelties of war the Department was obliged to meet with new inventions of its own, and it would be passing strange if no mistakes had been made. But the difficulties and dangers which pressed upon the Department through the conspiracy at home, various and formidable as these were, were by no means the only ones against which it was necessary to guard. The unfriendly and threatening attitude assumed and held by England, the presence of France in Mexico, and the intentions avowed by the emperor, showed conclusively that our only security against foreign war would be not alone the power to defend our coast, but to make a successful attack upon a foe. It was evident that in case of a war with France, or England, or both, though we might with our iron-clads defend our coast from the combined attack, yet, if we had no powerful ocean cruisers with which to destroy their commerce or threaten them at home, that our

coast might be virtually blockaded by their fleets and our commerce destroyed, while their own merchant-ships would be safely employed on every sea.

In attempting to provide against this danger, a very serious obstacle presented itself. It was evident that such cruisers as would be needed must be steamers with the highest possible rate of speed. This would of course require a large consumption of coal, so large as to make it impossible to carry a supply for a long cruise. But the United States had not a single coal-ing station outside of their own home territory. England, on the contrary, has such stations on almost every coast, in nearly every sea. In extending, perfecting, and securing her commercial system and a secure basis for her naval operations, she has shown a matchless sagacity and statesmanship; and so far as human wisdom could do it, she has provided in this respect against every exigency of the future. In every part of the world her steam-cruisers are within proper distance of the needed supplies, and, making only short voyages, they can traverse every sea. In every naval contest, therefore, she would have facilities which would give her immense advantages over every other nation, but especially over one like ourselves, having no depots for coal except at home. It was clear that in a war with England and France they might exclude us from all or nearly all the coal stations in the world, outside of our own territory, and confine us at home as effectually as if we had no Navy.

The enterprise and energy which characterized the Department during the whole war enabled it to provide for these new dangers, while sorely pressed by the difficulties and burdens of the rebellion. It decided to lay down an entirely new class of ships, of which the Wampanoag may be regarded as a type. This vessel is 335 feet long and 45 feet in breadth, and her measurement is 3,200 tons. It was not intended that these vessels should be overloaded with a battery. Their armament consists of a few heavy guns. They are full ship-rigged, their capacity for carrying coal is great in proportion to their size, and under either sail or steam they were expected to make at least fifteen knots per hour. Up to the time of the close of the war, these ships were the latest expression of American thought

for an ocean cruise, to meet our difficulties and our wants in case of a foreign war.

There are several features of these steamers which are worthy of attention, as showing how the minds of our naval constructors were still working in the same general direction already indicated, with only such variations as special circumstances required. The *Wampanoag* is nearly twice the length of the frigates of 1812, such as the *Constitution*, while her breadth is about the same, a very remarkable change in model. Again, she is fifteen feet longer than the *Niagara*, and ten feet narrower; and although she is longer than the *Niagara*, yet her burden is less by 1,380 tons, according to the old measurement.

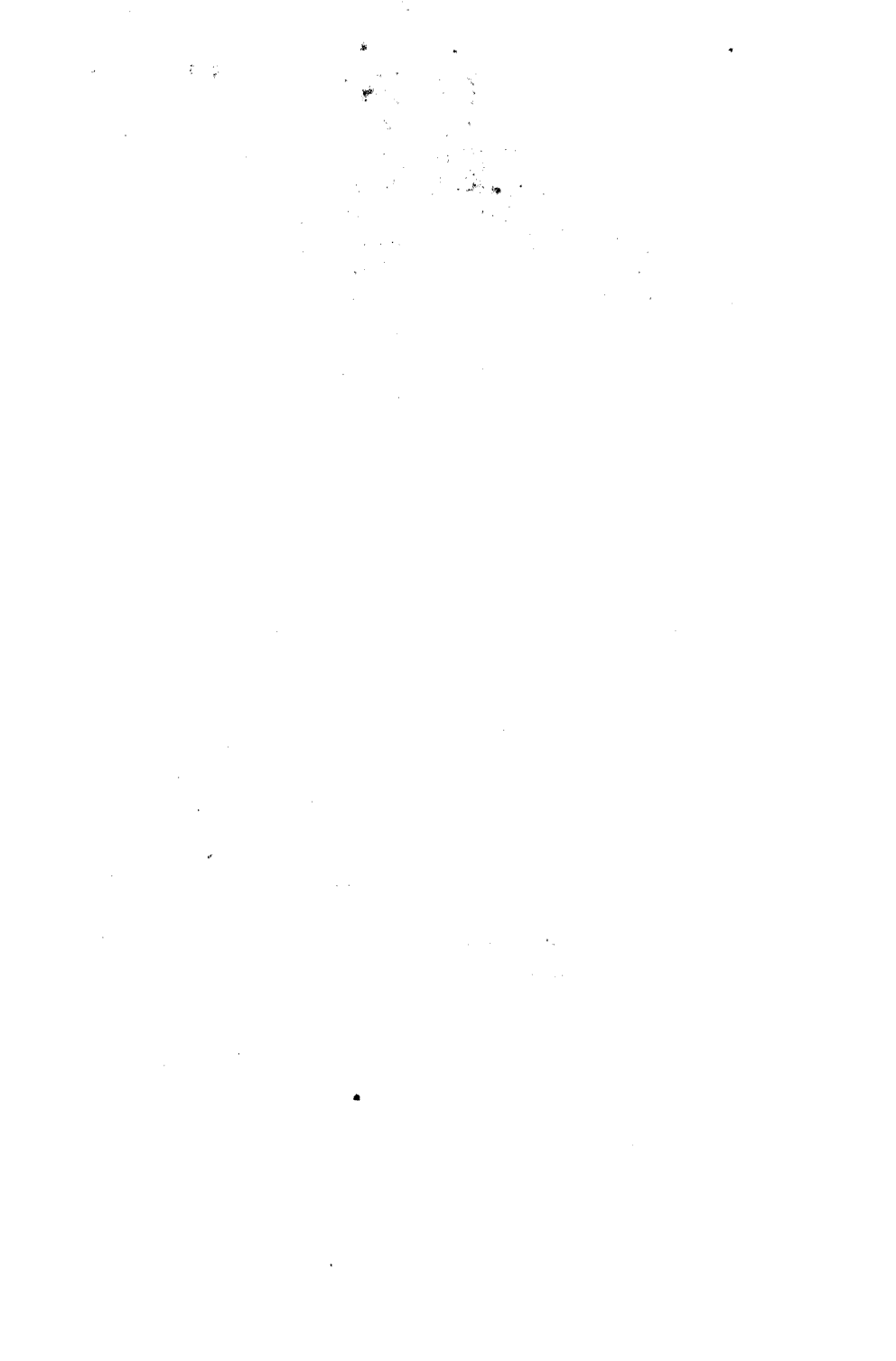
The peculiarities of these ships are obvious; their spread of canvas is enormous, and this, with their great length and comparative narrowness of beam, gives them the utmost speed attainable by vessels under sail. At the same time, instead of the weight of a full battery, they carry the most powerful engines that even their immense hulls can bear, and have therefore the maximum speed which any ocean steamer has yet attained. Their few heavy guns and the rapidity of their movement enable them to cope with any wooden ship, if they choose to risk a battle, and they are fleet enough to avoid a conflict when they do not desire a fight.

In case of a war with England it is quite easy to see what the proper work of such cruisers would be. It would not be to fight the British Navy, for we have other ships better fitted for that work. It would not be their province to defend our coast and seaboard cities, for that can be done effectually by our iron-clads. But let one of these enormous sea-racers take in a full supply of coal, and then using her engines only when absolutely necessary, cross the ocean under sail and place herself on one of the highways of British commerce, prepared there to use steam or sails as might best suit her purpose, who can measure the havoc she would make. Suppose thirty such were scattered over the seas, how long would the merchant marine of England remain afloat? Such are the formidable weapons which Great Britain by her unfriendly and deceitful course has prepared against herself whenever the occasion comes. Compared with what these new American steamers are able to do, her Ala-

bamaa, and Floridas, and Shenandoahs are very harmless ships, and in a war with America now, any foreign nation would meet such powers for destruction as Europe has never yet encountered. Thus in the midst of the pressing demands of the war at home, the nation was also prepared for a foreign war, if that also should come.

Leaving the discussion of the question of the iron-clads, whether of the Monitor class or those peculiar ones designed for the Mississippi and its tributaries, for future consideration, it will be useful to review very briefly the measures adopted by the Navy Department for the defence of the country and the suppression of the rebellion. Without ships, or guns, or seamen, or even suitable materials, or workshops for building, the Secretary, in the first weeks even of his administration, was called upon to make effectual a blockade declared for a coast-line three thousand five hundred miles in extent, besides inner coast-lines and inlets, a task which neither England nor France, with their immense navies, had ever thought of attempting, which they declared impossible, the very idea of which was laughed to scorn by many of those who were thought to be the best judges of maritime affairs. The Department was required to execute without means the boldest conception of modern warfare.

To accomplish this it was necessary, first of all, to use the Secretary's own language, "to make available every naval vessel, to recall our foreign squadron, to increase our force by building new vessels and by procuring for naval purposes from the merchant service every steamer which could be made a fighting vessel, to enlarge at once the capacity of the navy-yards, to put in requisition the founderies and the workshops of the country for supplies of ordnance and steam machinery, to augment the number of seamen, and to supply the deficiency of officers by selecting experienced and able shipmasters and others from the commercial marine." After providing for the purchase of every available ship, it was found that the peculiar character of the Southern coast required a new class of steamers; and accordingly, without even waiting for the action of Congress, such was the emergency, that the twenty-three small vessels were contracted for which were intended for service on the Southern rivers, inlets, and sounds, to search out and break up the secret



depots of trade with the blockade-runners, which new centres of business had been established on the shallow waters within the outer coast-line. To give the reader an idea of these concealed but busy spots, and to show the need of light-draught gunboats to discover them, the following extract from the letter of an Englishman is inserted, giving an account of his visit to such an inland post in the vicinity of Charleston: "Embarking with the mystery of a conspirator on board a small steam-tug laden with the most explosive and combustible goods, this witness for the press is carried down the dreary estuary of the Ashley and Cooper Rivers, passing a few dark and rakish privateers, and one or two unfinished ships intended for the Confederate Navy. Steaming boldly for the open sea, he and his friend glide by Forts Sumter and Moultrie, which, together with the new earthworks and batteries on shore, appear to make of Charleston a miniature Cronstadt. Creeping along the coast with their hearts ill at ease, for the lights of the blockading frigate shine at no great distance, and the breakers are unpleasantly near, the adventurous voyagers at length get into quiet water in a narrow sound between a low, reedy islet and the mainland. They make but slow progress, for the tug has a couple of scows in tow, with heavy cargoes of cotton, and turpentine, and the channel being of no great depth, these are sticking constantly hard and fast upon sand-banks. There shoot forth, however, from secluded creeks and inlets, lurking boats, by the aid of which the tug is sent forward before the unfriendly dawn can reveal her position to the Federal man-of-war. The little expedition thus reaches in safety the secluded spot where the unconquerable genius of trade has opened a new outlet for the produce of the South."

The scene is thus described: "It was broad daylight when we emerged from this reed-fringed creek upon a space of open water, skirted by broad rice-fields, dotted here and there with square, antiquated houses and contiguous collections of negro huts. But rebellion had made this quiet bay a busy focus of industry; and, as we panted up to a new wharf, along and near which twenty-six vessels were lying, and I saw the desperate traffic carried on in utter defiance of the blockade, I gave the Southerners credit for greater energy than I had believed pos-

sible. Among the ships I observed the notorious privateer *Sumter*, which had arrived the day before with a prize laden with valuable silks and wines, two other privateers, and a captured Boston clipper, which was being cut down and pierced for guns. The other vessels were either prizes or merchantmen, owned in Liverpool or New York, which, having brought in cargoes of foreign goods and munitions of war, were being loaded with rice, cotton, and turpentine. Nearly all the cotton, it was stated, would find its way to New England. Five ships, I was told, had sailed through the night. It was from this harbor that Mr. Slidell and his friends sailed for Cuba, on their way to Europe, and until its whereabouts is discovered, and the mouths of these inlets effectually closed with stones and sunken lighters, the blockade is a mere sham, and the trade with Charleston virtually opened."

In the course of a tour through the adjoining States, the special correspondent found other ports where a thriving import and export business appeared to be carried on without the slightest concealment or chance of interruption. At Wilmington, North Carolina, no hostile squadron had ever troubled the repose of the prosperous and contented merchants, the embouchure of Cape Fear River having apparently been overlooked by the official geographers of Washington.

This work provided for, the next step was to increase the number of steamers which could keep the open sea as blockaders, and which should be equal in speed to the illicit traders of England, and be able to follow the pirates which she had fitted out in her ports. The wisdom and success of this movement were both shown by the result. By these new vessels the swiftest steamers that England could produce were caught, and by one of them the *Alabama* was destroyed.

The next difficulty was the one encountered by the screw gunboats in attacking forts and batteries in the narrow, winding channels of the inlets and rivers, in positions where they could not turn, and not being able to back, were sometimes exposed, almost helpless, to the enemy's fire. To obviate this the Department contrived the novel ships called the "double-enders," side-wheel steamers, built with both ends alike, and therefore capable of going either way; vessels of great speed, and an-

swering in every essential particular the original purpose. Still it was found impracticable to command those shallow waters and narrow channels by wooden vessels only, because they were constantly exposed to the fire of forts and batteries at so short range as greatly to endanger them. For this exposure the light-draught Monitors were designed; and but for a mistake in the drawings, which the Department certainly could not foresee, and for which it is only indirectly responsible, they would have proved a most valuable addition to the Navy at that time. The plan devised was a proper one, the principal drawings were correct; but in the details a mistake was made which could not be detected until too late to be remedied.

Having thus provided for the dangers of the rebellion, the Department, as has just been shown, began the construction of those immense and swift steamers which, in case of a foreign war, could sweep the commerce of an enemy from the sea. Add to these statements the actual increase of the Navy as exhibited by the Secretary's reports, and together they present in the most convincing manner the skill, enterprise, and power with which this branch of the Government was conducted. In no case was the honor of the nation compromised, and Europe has not withheld its praise of its boldness of conception and the energy of its execution.

In the commencement of the struggle the number of seamen available at all our naval stations was about two hundred, according to the Secretary's report, and the ships then in commission, including the sailing vessels, were 42; on July 4, 1861, 82; December, 1861, 264; December 1, 1862, 427; December 7, 1863, 588; December, 1864, 671.

The increase of the number of seamen was of course in proportion to the growth of the Navy, and it was a matter of no small difficulty to procure promptly crews for so large a number of ships, when the land service was making such frequent and sweeping requisitions upon the able-bodied men of the country.

In this short review only a single feature of the work of the Navy Department has been presented—the increase of our wooden ships. These, however, formed only a part of the forces which were almost literally created for the service of the coun-

try. The iron-clad Navy, both for the eastern waters and for the Mississippi and its tributaries, upon which the contest actually hinged, and the new heavy guns, without which even the invulnerable ship is comparatively of small value, these are yet to be considered as a most important work undertaken and performed, amid difficulties and doubts and serious opposition, not from the ignorant alone, but from scientific and experienced men. And when these mighty and novel instruments were all ready, then began a labor still more difficult than the purchase or construction of ships or the casting of cannon. It certainly required administrative ability of the very highest order so to employ the various enginery of war on all the wide and diversified field of action, demanding at once such different labors as to insure success in each important movement, and at the same time cause all to tend steadily toward the one important end. The history, as it proceeds, will show whether this was done.

CHAPTER XI.

THE IRON-CLAD NAVY.

IN order to complete, in one view, the general policy and chief measures of the Navy Department, it is necessary to present the important subject of armored vessels, and the various forms of iron-clad ships prepared or adopted here and in Europe. There are no means of judging whether the interests of the country were committed to proper hands, whether the Department was prudently bold or rashly adventurous, except by studying first the exigencies of the case, and then the question of armored ships as it was viewed by men of science and nautical skill both here and in Europe.

The main features of the country's necessity are easily understood. It is well known that the rebels, by European credit, sympathy, and aid, and by the sale of large amounts of cotton which at first they could ship in spite of the blockade, were enabled to begin very early in the contest a navy on a formidable scale, and in this movement they acted under the best advice that England and France were able to give. They turned their attention exclusively to iron-clad ships. They reasoned in this manner: "There is no fortification on the Northern seaboard which a well-constructed armored ship may not pass with impunity, and if we can get one such vessel afloat before the North can build one, the Northern cities, Washington included, will be at our mercy; we can break the blockade at any point, and we can drive off, or capture, or destroy the whole Union fleet. At the worst, with the help of our English and French friends, we can build such ships as rapidly as the North can, and we shall at least be upon an equality with them even

their service, and with a power at their head that worked directly when necessary, and without much incumbrance from legal formalities, their preparations were urged on with far greater rapidity than was possible in our own Navy Department, where every step was very properly subjected to Congressional scrutiny and authority, at a time too when the country could not know its peril, and when little or no interest was generally felt in armored ships because so little was known.

It was evidently of vital importance either to destroy the Merrimack where she was, or capture her before she could leave Hampton Roads, but to recapture the navy-yard was at that time beyond the power of the Government; it had not an iron-clad ship, and to construct one of any form then known, of sufficient size and force to cope with the rebel frigate, was the work not of months but of years. Two very perplexing questions were then presented: Is the Merrimack too formidable to be captured or crippled by wooden ships? and if she can be met only by an iron-clad, then how is the suitably armored vessel to be obtained in season? Upon these points very little satisfactory information could be obtained. England and France had each constructed one or more armored ships, and others were in process of building, but these were all broadside vessels, and the question whether such ships were really available for naval war was still being warmly discussed in Europe. The following extracts from a work on "Iron Defences," by General Sir Howard Douglas, published in 1861, will show how the subject of iron-clad vessels was viewed by some distinguished thinkers in Europe: "A very able and distinguished French officer, M. Richild Grivel, a great admirer and advocate of the Emperor Louis Napoleon's floating batteries, constructed for the attack of forts and fortresses and other special purposes in inland seas, condemns, in no measured terms, the notion of the possibility of using them in ocean fleets as substitutes for line-of-battle ships. Admitting fully the advantage of floating batteries, gunboats, and other vessels of light draught of water for the special service above stated, he has well said that to dominant fleets of line-of-battle ships, the true representatives of naval power for service in the open sea, will always belong the sovereignty of the ocean; and that the nation that would renounce

these true representatives of naval power by constituting their fleets of comparatively small ships adapted only to services purely special, would be infallibly erased from the category of first-rate naval powers."

It will be seen that this distinguished French officer assumed it as a conceded fact that it was impossible to construct an armored battery that should answer the double purpose of a shot-proof vessel and an ocean cruiser. This was also the opinion of many in England. In remarking upon this opinion of the French officer, Sir Howard Douglas goes on to say: "If we should be so infatuated as to commence forthwith the construction of our Navy on such a principle, England would surely ere long be erased from the category of first-rate maritime powers, and lose the empire of the seas. Such really has been the delusion in the case of *La Gloire*; such the panic upon the mere appearance on the sea of that solitary frigate, and she a failure, that I should not be surprised when that delusion shall have been dispelled, and it is passing now, if it were spoken of as in the days of the Warner hoax. I am quite sure that as much nonsense, deceit, deception, and credulity are exhibited in the one as there were in the other. But though I know that *La Gloire* is a failure in speed, and in all the qualities required in a sea-going ship, yet the public mind has been brought to such a state of fever and delusion on this subject, that I will allow that the Government is perhaps right in laying down other such monsters before the *Warrior*, the *Black Prince*, and the *Defiance* are launched, and have been tried."

In another part of the same work, Sir Howard Douglas thus refers to opinions then prevailing in the United States: "Although the naval force of the United States has been increased by the addition of twenty screw-steamers, a still further increase in the Navy has been recommended in the report of the Secretary of the Navy; but no iron-cased vessel is built or being built, nor even alluded to in the very able report on the increase of the Navy, nor in the miscellaneous observations and contemplated changes. The experiments tried in the United States in endeavoring to render ships proof against shot by covering their sides with iron plates of adequate thickness having proved that nothing less than six inches will suffice, and

a commission of naval officers having deprecated the proposition to apply naval resources to coast defences in the form of floating batteries, the Government of the United States are satisfied as to the futility of all such expedients, and probably consider all these questions definitely settled."

Another extract from the same writer will show another opinion then prevailing among scientific naval officers in regard to the question whether a wooden vessel of high speed could contend successfully with a slower iron-clad: "Metallic protection and power of speed are antagonistic qualities. One or other of these must be sacrificed. Which of them should be given up is a question which I propose to examine hereafter. In the mean time it may be remarked that it does not appear, upon a careful review of improvements and changes in the art of war, that the best way of opposing new modes or means in the practice of war is to imitate those innovations. If this were so, the practice of war would not have altered, as we see in a review of its history. It would rather appear that improved science seeks to counteract, rather than to imitate, and the question arises whether this might not be successfully done in the case of iron-sided vessels, which must necessarily lose speed. It is, therefore, a question, whether by superior speed, and a judicious mixture of armament, 68-pounder guns on the main-deck, and Armstrong's long-range 40-pounders on the upper deck, a vessel like our *Mersey* might not be capable of contending with such a ship as *La Gloire* with her speed reduced to inferiority by the heavy armor under which she labors."

Another question of great importance is thus discussed by the same distinguished officer, the effect of shells upon wooden ships: "Reviewing the effects produced by shells on the ships of the allied fleet in the bombardment of the 17th of October, 1854, at Sevastopol, it does not appear that the effect of shells was so fatal or so destructive as had been previously imagined, and I confess that I partook of the belief that a shell, and particularly a time-fuse shell lodged, and then exploding in a ship, could scarcely fail to set her on fire, or destroy her. But from the account given it appears that all the ships of the allied fleet were struck and penetrated by numerous shells, yet no ship was destroyed, none 'converted into lucifer matches.' Four or

five times fuse-shells burst on board the Albion, and set her on fire several times. The Sanspareil, London, Albion, and several other ships were penetrated by shells, and suffered considerably in their hulls from shells from the Telegraph and Wasp batteries. The London was three times on fire; the Queen forced to retire, having been set on fire by red-hot shot. The Agamemnon suffered severely from the enemies' shells. One shell burst on the main-deck of the Arethusa, and carried off nearly the whole of two guns' crews; another committed great injury on the lower deck: The Ville de Paris received a shell which blew away a part of her poop-deck, killing and wounding a great number of men. She received forty-one shot and shell in her hull, and nearly as many in her masts and rigging; but was not put *hors du combat*, though she was set on fire several times, the fire being promptly extinguished."

These extracts serve to show the views of a large class of influential men in Europe upon three important points: the value of armored ships, the effects of shells upon vessels, and the question whether a swift wooden ship might not capture a slow iron-clad battery by using 68-pounder smooth-bore guns and 40-pounder rifles. Sir Howard and his friends evidently thought it could be done. His treatise was published about the time of the beginning of the rebellion, and it is a remarkable example of the tenacity with which men cling to opinions which have long swayed the public thought, of the stubbornness with which innovation is resisted, and of the blindness which prevents men from discerning the signs of the times. When a theory in regard to any important subject has become embedded in the thought of the time, and when it shapes some important department of public action, so that any change involves the pride of opinion, and would affect the interest of capital and industry, such a theory will often long maintain its authority after it has been proved false both by reasoning and by experiment. The old rulers of thought and practice distrust, or perhaps scorn and ridicule, the *new men* and their *speculations*, and truth, however plain, cannot, for a time, get herself recognized; and the established opinions, and all the related interests, struggle hard to maintain their position, and fact and reason are often alike discarded. It was not to be expected that an institution so vast

as the British Navy, whose glory and interest and wide-reaching operations were interwoven with every fibre of the national life, could be suddenly revolutionized without violent and protracted opposition. As a class the members of the Government, committed to things as they were, and following the footsteps of "illustrious predecessors," the designers and builders of ships, the inventors and makers of guns, the officers who had sailed and fought the old vessels, and won renown and station on their decks, all these would naturally oppose all changes which seemed to throw any discredit upon a Navy that had made England the mistress of the seas.

Had not prejudices and interests, such as have been mentioned, interposed to prevent a rational conclusion, Sir Howard Douglas would probably have seen that the effects of shell-firing upon the French and British ships at Sevastopol, almost equally with the destruction of the Turkish fleet at Sinope, proved that no wooden vessel can long resist those fearful weapons, especially in close-range fighting. He did not think proper to state whether, in his opinion, those ships of the allies could have endured another day's fire from the Russian fleet. The fact was, that the attack was not renewed.

The action between the Kearsarge and the *Alabama* was a much more decisive test of the destructive power of shells than that at Sinope or Sevastopol. The *Alabama* was an English ship, armed with English guns, and manned by British seamen; and in a brief battle, not fought at short range, she was demolished and sunk by shells from our 11-inch guns.

Had the *Alabama* been a line-of-battle ship, firing only solid shot from 32-pounder or 42-pounder guns, she would have met the same fate. In regard to the question whether a swift wooden ship could capture a slower iron-clad, we need only the experience of our American battles to settle it in the most conclusive manner. It would have required but a few minutes for the *Merrimack* to destroy the most powerful wooden ship in the world. She would have sunk any other frigate, or even a 100-gun ship, as readily as she did the *Congress* and *Cumberland*, and that without any aid from her prow. A swift wooden ship might escape from a slow iron-clad, but to engage her, if armed with heavy shell-guns, would be only to court destruc-

tion. How long could any wooden ship endure the explosion of 15-inch shells?

But these questions will all be fully answered in the discussions in another chapter. They are introduced here merely to show the state of the public mind in Europe when our war began, and the Government was called upon to decide upon its means of defence. When a large and influential class both in France and England were clinging tenaciously to the wooden ship, and rejecting the idea of cannon longer than those then in use, it showed the boldness and independence of the American mind that both parties turned at once to iron-clads as the chief means of attack and defence. The rebels, as a matter of course, from their strong sympathy with England, turned to and adopted her ideas and plans, with such alterations as the latest experiments had suggested. The Merrimack, which early in the war they were pushing to a completion, was really an English iron-clad, with the improvement of the sloping armor. The problem presented to the Navy Department was how to capture or destroy an iron-clad frigate, which represented the skill and science of Europe, and in general how to prepare to meet the iron-clad navy which the rebels were rapidly getting ready. The true position of our own Navy Department cannot be clearly seen; the merit or demerit of its course cannot be justly weighed without giving some account of the origin of the idea of plating vessels with iron, and the progress which the invention had made about the time of the beginning of the rebellion, and then, also, the peculiar and original character of the new American iron-clads will distinctly appear. The following extract from Sir Howard Douglas's work (page 392) will give the English account of the origin of this invention: "The project of covering ships with iron plates, in order to render them shot-proof, was suggested many years since by Colonel (the late General) Paixhans. The *Comité Consultatif de la Marine* at that time having caused the weight of an iron covering, and the capability of ships to bear the load to be calculated, found that such armor could not be applied to line-of-battle ships of the lowest class, to frigates, nor to smaller vessels. With respect to ships of three decks, the *Comité* stated in its report that the great displacement of these would enable them to bear the re-

quisite weight, provided the quantity of artillery on the upper decks were diminished. This inquiry led however, to no attempt in France to *cuirass* ships-of-war, and the project was at that time abandoned, apparently as impracticable. A proposal for constructing floating batteries, so thick as to be shot-proof, was entertained by the Government of the United States, in or before the year 1852, and the feasibility of the proposition was made the object of an experiment; the result of this being unfavorable, the project fell to the ground."

The subjoined extract from the *Scientific American*, February 7, 1863, presents an American account of the same invention: "On the 22d ult., Senator Cowan, of Pennsylvania, presented a petition in the Senate from A. Stewart, and others, asking for a pension to the widow of Thomas Gregg—it being claimed that he was the original inventor and patentee of iron-clad vessels. This is a new phase of this subject, and a brief history of the invention, according to the information we possess, will therefore be of some public interest just now. It is generally admitted by European engineers that although iron-clad gunboats were first brought practically into use in the Crimean War, the late Robert L. Stevens and E. A. Stevens, of Hoboken, N. J., were the inventors of these vessels protected with angulated iron plates, and were proposed by them as early as 1816, for coast and harbor defence. A description of such vessels was afterward submitted to a Government board, consisting of Commodores Stewart and Perry, and Colonels Thair and Totten, in 1841. It was stated in the document proposing the construction of such a vessel for the defence of New York, that plates of iron four inches in thickness were equal to five feet four inches of oak in resisting a ball at point-blank distance, and with the guns then in use, it was supposed that none of their shot could penetrate a vessel clad with such an armor. In 1843 a contract was formed between our Government and Messrs. Stevens for the construction of such a floating battery, and \$500,000 was furnished by Government, and expended on the battery now at Hoboken. During the Crimean War, in 1855, it was found that wooden steam-frigates were totally useless in attacking granite casemated forts defended by big guns firing shells. An application of Stevens's invention was suggested,

and several iron-clad gunboats were then built for the French and English navies. A few of these were employed at the siege of Kinburn, and were decidedly successful. This led the Emperor of France to extend the application of iron plates to one of his large frigates, *La Gloire*, which was completed three years ago, and was the first regular iron-clad war-ship ever built. Since then several have been constructed for the French and English navies; the American invention having thus been first carried into practical use in Europe."

It will be seen that the British and American authorities differ essentially in regard to the effect of shells upon wooden vessels, and also in regard to the success of the iron-clad gunboats at the siege of Kinburn. The events of our war have shown that Sir Howard Douglas had materially underrated both the effect of shells on wooden ships and the measure of resistance which iron armor offers to a shot. In this, as in some other respects, the experience of the United States has revolutionized the opinions of the world.

It is important to trace here the progress of the building of iron-clad ships in Europe up to the time when our own Government began the construction of these new weapons of war. Passing by the small gunboats which fought at Kinburn, the first important trial of the iron mail was by the French emperor on the frigate *La Gloire*, the construction of which was ordered in 1858. She is simply a frigate of the common model, cased with iron plates about four inches thick. The plates are said to be three and a half inches thick at the stern and bow, and four and a half inches in the centre, covering the ship's battery. She is described from French authorities as about 257 feet long, carrying thirty-six 50-pounder rifles on a single protected deck. Her engine is of 900 horse-power, and her crew consists of 500 men. Her ports are only six feet above water. Her width is fifty-six feet, and her speed is stated to be thirteen and a quarter knots per hour. This statement, however, has been denied by Sir Howard Douglas, who declares that on her trial trip, without the full weight on board which she is expected to carry, she made only a trifle more than eleven knots. The French emperor ordered the construction of ten more frigates of this class. Besides these, France, at the beginning of our

war, had nearly ready the *Normandie*, the *Invincible*, the *Couronne*, and two larger iron-clad rams, the *Solferino* and the *Magenta*. These last carry each fifty-two guns, and were intended to have a speed of thirteen and a half knots per hour; but it is by no means probable that this speed can be maintained at sea.

The lower ports of these vessels are eight feet above the water. It is stated in the *North British Review* (August, 1863), that these largest French frigates are plated in the centre with iron six inches thick. The *Normandie* has crossed the Atlantic, but no very favorable account has as yet been given of the sea-going qualities of any of these French ships. They are said to roll very heavily, and it is also stated that their batteries cannot be used in a heavy sea, because the ports roll under. So far as is yet known, all the broadside iron-plated ships roll heavily in a rough sea, and the remedy for this is not at present known.

In the *North British Review* for August, 1863, is the following table, presenting the French and English iron-clad Navies as they then were, and as these vessels were either finished or being built at the beginning of our war, it will show with sufficient accuracy what had been done in Europe when the question of an iron-clad navy was first presented by our Government. The account, we are informed by the writer, is copied from official papers. It includes vessels afloat and building, and is as follows:

	Armor-plated.	Liners. Screw.	Frigates. Screw.	Frigates. Paddle.	Corvettes. Screw.	Corvettes. Paddle.	Block-ships. Screw.	Other Steam-ships.	Total Steam.	Total Sailing.
England.....	21	59	44	16	30	..	9	380	566	102
France	16	37	29	18	7	9	..	244	360	122

At Kinburn the French emperor proved that iron-clad batteries could, without injury, sustain a fire which would be utterly destructive to wooden vessels. He pursued the conclusions thus arrived at, and finally, in 1858, ordered the construction of four iron-plated frigates—*La Gloire*, *L'Invincible*, *La Normandie*, and *La Couronne*. The first three are on wood frames; the latter is iron throughout. They are about two hundred and thirty-one feet in length, carrying thirty-six 50-pounders on a single protected deck, with two more on an upper deck,

unprotected. Their engines are of nine hundred horse-power, and the crew five hundred and seventy men. All these are at sea, and have been found successful; but the ports being only about six feet above the water when at load draught, they are placed at a certain disadvantage in bad weather. Subsequently two others, the *Solferino* and *Magenta*, were ordered, which have been launched, but are not yet completed. They are armed with a "spur" projecting from the bow, carry their guns in two tiers in the centre of the ship, and the lower ports are eight feet from the water-line. Their length is two hundred and eighty-two feet; draught, twenty-five feet; and horse-power, one thousand.

In November, 1860, ten more were ordered, which are still on the stocks, and are being slowly proceeded with. They are to be of the *Gloire* type, and all of wood frames, except the *Heroine*, which is of iron; but the thickness of the plates has been increased from three and a half to four inches of the *Gloire*, to four and a half to six inches. All the other iron-plated vessels under construction in France at the present moment are merely floating batteries for harbor defence. Our own armor fleet, though more tardily commenced, now stands thus:

	Hull.	Armor-plated.	Tons.	Horse Power.	Length	Draught.	Guns.	Men.
<i>At Sea.</i>								
Warrior.....	Iron	Partially	6,109	1,250	380	22 9	40	704
Black Prince.....	"	"	6,109	1,250	380	26 3½	40	704
Defence.....	"	"	3,720	600	280	24 11	16	445
Resistance.....	"	"	3,710	600	280	24 10	16	455
Royal Oak.....	Wood	Wholly	4,056	800	273	25 10½	35	600
<i>Launched.</i>								
Caledonia.....	Wood	Wholly	4,125	1,000	273	25 10½	35	600
Ocean.....	"	"	4,047	1,000	273	25 10½	35	600
Prince Consort.....	"	"	4,045	1,000	273	25 10½	35	600
Hector.....	Iron	Partially	4,089	800	280	24 8	32	600
Valiant.....	"	"	4,063	800	280	24 8	32	600
<i>To be Launched, 1863.</i>								
Minotaur.....	Iron	Wholly	6,621	1,350	400	25 8	37	704
Achilles.....	"	"	6,079	1,250	380	26 3½	30	704
Royal Alfred.....	Wood	"	4,045	800	273	25 10½	35	600
Zealous.....	"	Partially	3,716	800	252	25 3	16	...
Royal Sovereign.....	"	Wholly	3,963	800	240	22 11	5	200
Prince Albert.....	Iron	"	2,529	500	240	20	5	160
Research.....	Wood	Partially	1,253	200	195	14	4	...
Enterprise.....	"	"	990	160	180	14 4½	4	80
<i>To be Launched, 1864.</i>								
Agincourt.....	Iron	Wholly	6,621	1,350	400	25 8	37	600
Northumberland.....	"	"	6,621	1,350	400	25 8	37	600
Favorite.....	Wood	"	2,186	400	225	20 5	8	160

Other authorities state the number of iron-clads in the French Navy at ninety-four; but, as the English reviewer re-

marks, all but those enumerated are merely swimming batteries for harbor defence, and small gunboats, such as were used at Kinburn, in the Crimean War. Of these swimming batteries and gunboats, the *National Almanac* for 1863 enumerates seventy-seven, leaving, of the ninety-four iron-clads, only seventeen for the ocean-going ships, which corresponds very nearly to the statement of the *Review*.

In addition to these tables and the description of *La Gloire*, the following account of three of the most formidable iron-clads of England will show more clearly the exact form in which the subject was first presented to our own Navy Department. It was necessary to consider how we could best meet the armored ships of France and England, as well as those which the rebels might construct, because, in the early part of the contest, it seemed as if these powers needed only an occasion to become active parties in the war.

The *Warrior* and the *Black Prince* are regarded as the model ships of the iron navy of England, and they may be considered as embodying the utmost skill and science of Great Britain at the present time. These ships are 380 feet long; their tonnage is 6,000 tons; their draught is, of the one, 22 feet 9 inches, and of the *Black Prince*, 26 feet 3 inches. They each carry forty guns: twenty-eight 68-pounder, and twelve 100-pounder Armstrong guns. Their crew is 704 men. Their armor-plates are four and a half inches thick; and the *Warrior*, on her trial trip, had a speed of fourteen knots, and the *Black Prince* ran from twelve to thirteen knots per hour. Their engines are of 1,250 horse-power.

These ships are only plated with iron for two-thirds of their length, the bow and stern being, as English writers affirm, more vulnerable than a common wooden ship. The battery only is protected by the iron mail, while about sixty feet of the stern and bow are like a common vessel.

The *Minotaur* is 400 feet long; her tonnage is 6,621 tons; her engines are of 1,350 horse-power; her draught is 25 feet 8 inches, and she is to carry thirty-seven guns. Her speed has not been ascertained. Portions of the armor of this ship are said to be six inches thick. The *Bellerophon* is a newly-devised iron-clad, now being built, whose coming is thus heralded by the *London Times*: She will be "as terrible an assailant to iron-clads as an iron-clad would be to wooden ships. The object for which this vessel is designed is, in case of another great war, to avoid repetition of the long, dreary process of blockading an ene-

my's fleet, by wearisome and dangerous cruising off the mouth of harbors. The *Bellerophon* is, in short, to a fleet of iron-clads what a fox-terrier is to a pack of hounds. In case of an enemy's iron fleet running into port, she can follow them with impunity."

But in the description which the *Times* gives of what it calls "this monster," one fails to discover the immense superiority which is claimed.

She is 300 feet long, 56 feet beam, has a draught of 25 feet, and her tonnage is 4,246 tons. "It is hoped," if certain improvements work well, that she will make fifteen knots per hour; but she is on the stocks as yet, and her speed is yet to be determined. Her armor-plates are six inches thick, but they reach to the upper deck for only ninety feet of the ship's length; for the remaining distance of two hundred and ten feet, the plating reaches only six feet above the water, and all above this line and both ends of the vessel are unprotected. She is to be armed with ten broadside guns, of what size we are not informed, and probably that is not yet determined.

Of iron-mailed vessels, of the general character described—most of them, however, somewhat smaller—England has between twenty and thirty built, or in process of construction. Like those of France, they are all broadside ships, and, of course, expose an immense surface to an enemy's fire. The importance of this will appear, when they are compared with the American Monitor form of war-ship.

The objections made to the French ships are, that they cannot use their batteries except when the sea is smooth, and that, in rough weather, they roll so as to render them not only uncomfortable, but dangerous. The English ships require from twenty-five to twenty-six feet of water, and are, therefore, unable to enter our principal harbors. From their great size, they are unwieldy; the joints of their armor-plates work in a sea, and leak; they do not steer safely; and, from the general tone of English criticisms, one is led to infer that they are by no means satisfied with the performance of the iron fleet. But, as neither the French nor English ships have been, as yet, tested in battle, no very definite opinion of their qualities can be formed.

We know, however, exactly the effect which certain kinds of artillery will produce upon iron plates, such as those which form their armor; and as the American ships have been exposed, at short range, to the heaviest cannon and the most destructive shot which England could furnish to the rebels, while at the same time our guns have been tried upon armor-plates in action, we have the means of forming a very accurate opinion of our power for attack or defence, as compared with other nations.

Such was the condition of the question of iron-clad vessels when first the Navy Department was called to its serious consideration. The problem of their usefulness was by no means considered as settled by scientific men and naval officers; and there was, to say the least, a very strong array of talent, experience, and science that adhered firmly to the idea that wooden ships without armor were the only proper vessels-of-war. Still, France had built a mailed frigate, and this, according to British testimony, spread such a panic through England as compelled the admiralty to begin at once the construction of plated frigates, more formidable as was thought than the French one. Upon this, the French emperor took measures to increase at once his own iron-clad fleet; and to match this, England laid down still more enormous monsters, till at the time of the breaking out of the rebellion the account of vessels built or projected stood as quoted in the tables presented. These, it should be remembered, were all broadside vessels. No idea of any different form of ship had then found any favor in Europe. Other plans had been suggested, but they had been rejected as worthless, and no government had ventured a departure from the obvious and simple contrivance of covering with iron plates the sides of a wooden ship. In the mean time the rebels were pushing rapidly to completion the first American iron-clad, the Merrimack, with her sloping sides and formidable battery; and the indications were that she might be ready for sea before any thing could be prepared to stop her.

It was evidently a perilous hour for the Government. In a short time, how short could not certainly be known, the rebel frigate would be ready for the work of destruction, and it was evident that a very slight thing might bring the French and English vessels to our shores.

This perilous crisis the Navy Department was expected to meet, and it was met with a boldness, and skill, and decision, not surpassed by any of the other operations of the war; and it should not be forgotten that this new danger was in addition to the nearly impossible task of sealing by blockade three thousand five hundred miles of our most difficult coast, with almost nothing with which to begin the work. Nor can the reader rightly judge of the difficulties of the situation, unless he

remembers that nearly all that we now know of iron-clads was then unknown. Not one decisive experiment had been made by which the Department could be guided. A few ships, or perhaps only one, had been *finished* at the beginning of Mr. Lincoln's administration; some others had been begun, but, as has been already shown, it was by no means settled whether they were really formidable or utterly worthless, for public opinion both in England and France vibrated to either extreme, and each found earnest supporters. The only important fact was, England and France were building huge broadside iron-clads, for the building of which not months but years were needed, with all the appliances of their national workshops; while the rebels were hastening to completion a similar one, within a few hours' sail of Washington. Early in May the subject came up for discussion in the Navy Department, and so little was then known in regard to this novel mode of warfare, such the unwillingness suddenly to abandon what were considered settled theories and long-tried practice, that, except with the Secretary, the plan found but little favor. It is supposed that when the subject was first considered, one or two only among the officers of higher rank in the Navy were willing to give their countenance to the new form of a war-ship, which few now would dare to condemn.

There was nothing unusual in this; nor is it cause for censure that naval constructors who had devoted their lives to certain methods of operation, sanctioned by the science and experience of the world, could not in a moment abandon all they had learned or done as of little worth, and adopt the dark conclusions which would contradict all their own experience and reverse the decisions of the world. Nor was it to be expected that naval officers should at once agree to sanction a novelty of which they could form no clear conception, and which had never been tested in battle.

It was well that the Secretary and his immediate advisers were somewhat more free from the trammels of previous education than some of their associates, and were ready to assume a responsibility from which others, and perhaps not unwisely, were disposed to shrink.

The convictions of the Secretary and the few who sustained

him were so strong, that it was decided to begin the construction of some iron-plated vessels, provided the money for such a purpose could be obtained; for then the Department was entirely destitute of means for such a work. Mr. Chase, then Secretary of the Treasury, was consulted, and he undertook to provide the means if an appropriation could be obtained. At the extra session of Congress, in July, 1861, the Secretary presented the subject in the following guarded language, showing how little preparation for it there was, either in Congress or the country at large, and giving no idea of the extended and earnest discussions which had long been going on. Whatever merit there was in first adopting iron-clads in the Navy belongs to the Department; the Monitor *form* is due to the genius of Ericsson. The following is the Secretary's language:

Much attention has been given within the last few years to the subject of floating batteries, or iron-clad steamers. Other governments, and particularly France and England, have made it a special object in connection with naval improvements; and the ingenuity and inventive faculties of our own countrymen have also been stimulated by recent occurrences toward the construction of this class of vessels. The period is perhaps not one best adapted to heavy expenditures by way of experiment, and the time and attention of some of those who are most competent to investigate and form correct conclusions on this subject are otherwise employed. I would, however, recommend the appointment of a proper and competent board to inquire into and report in regard to a measure so important; and it is for Congress to decide whether, on a favorable report, they will order one or more iron-clad steamers, or floating batteries, to be constructed, with a view to perfect protection from the effects of present ordnance at short range, and make an appropriation for that purpose.

It is nearly twenty years since a gentleman of New Jersey, possessing wealth and talent, projected the construction of a floating battery, and the Government aided the work by a liberal appropriation. The death of this gentleman a few years since interrupted the prosecution of this experiment, and application has been recently made by his surviving brother, the authorities of New Jersey, and others, for additional means to carry it forward to completion. The amount asked is of such magnitude as to require special investigation by a competent board, who shall report as to the expediency and practicability of the experiment before so large an expenditure should be authorized.

Very early in the session of this Congress a resolution of inquiry was introduced by Mr. Hale, of New Hampshire, calling upon the Secretary for information concerning all the transactions of his Department, and especially in reference to the purchase and construction of vessels. As heretofore stated, the Secretary had felt compelled, in order to meet the great need and peril of the country, to purchase as many suitable vessels as could be obtained, and contract for the immediate building of a fleet of light-draught steamers in advance of the action of Congress. It was understood that this resolution covered an implied censure of the Department, assuming that some wrong had been done, for which the Secretary should give an account at the bar of the Senate. Mr. Hale was chairman of the Naval Committee, and therefore had been one whose counsel the Secretary had sought in the beginning of his administration, and upon whose support he thought he could rely for any proper measure; and the hostility foreshadowed by this resolution was, therefore, more keenly felt than if it had come from the open opposers of the Government. The charges of extravagance, recklessness, and corruption which followed this beginning were exceedingly relished by the opposition members, who were very happy to agree with all who would attack any Department of Mr. Lincoln's Government. It added greatly to the difficulties with which the Navy Department had to contend, that a movement should have originated in a body so respected and trusted as the Senate of the United States, and with a distinguished member of that body, and one of the leaders in the Republican ranks.

As a matter of course it awakened suspicion all over the country. It was seized upon by every opposition leader and journal as proof positive of the incompetency and corruption in the Department, and the public mind was prepared, far and wide, not only for jealous watchfulness, but for an unfriendly judgment in regard to all that the Secretary or the Navy might do. To say the least, it was an ill-considered and causeless attack, and the consequences were such as every lover of his country, and of the right and true, has since had occasion to regret. Those who originated and supported it, found themselves obliged to strengthen their position in order to jus-

tify their course; and so, while the operations of the Army passed unquestioned, or with such a generous confidence as gave the War Department strength and courage, the Secretary of the Navy and his associates, and all their movements were subjected to the hostile scrutiny of those whom the people knew only as prominent and influential friends of the Administration, and who were supposed to speak thus of the Navy, because, as honest men and guardians of the public weal and treasure, they could not withhold their condemnation. With very few exceptions, there was probably little or no personal ill-will toward the Secretary or his associates, or any officers of the Navy. Senators and Representatives, and conductors of the press, who had not particularly studied this subject, came honestly to wrong conclusions. The country, at that time, had no proper conception of the magnitude of the struggle; and preparations made by the Navy Department, which a little time showed to be inadequate, were at first thought extravagant and uncalled for; and when an iron-clad navy was proposed, and particularly the Monitor form, and then the new heavy ordnance, men who by no previous training or education were fitted to pronounce a judgment in such matters, condemned and sneered at the whole thing; nor can it be said that they received no countenance in this from any of the older officers of the Navy. The opinions of some of these were quoted in the House and in the Senate; and when Senators of the Administration party, and some of the most experienced of the constructors and officers were known to disapprove the new ideas, the country was more than half inclined to think that the Navy Department was conducted by those who were dozing over the country's perils, or wasting time and money upon useless novelties and impracticable projects. The consequence was, that the men who, above all others, at that time, were devising and executing plans without which the country would have been lost, met little but censure and discouragement; a distrust of the whole naval service was created, and every gallant officer and seaman felt that a shadow was thrown over his reputation and his prospects. They felt keenly the fact, which was apparent to all, that the people had been taught not to honor or love the Navy as they did in former years. There were those in the Navy Depart-

ment who had the genius to devise and the courage to adopt the true method of meeting the public danger ; they had gone beyond the general thinking of their age, and met the usual reward, censure and ridicule, until they were justified by success.

Notwithstanding all this opposition and this attempt to censure the Department, Congress gave the authority to appoint a special board to examine and report upon the subject of iron-clads, and made an appropriation of \$1,500,000 to be used by the Secretary for the construction of one or more armored ships. The following report of the board, dated September 16, 1861, shows that though some progress had been made toward right opinions, the truth was, as yet, but dimly seen. The Department, with its novel ships and new ordnance, was doomed to remain under a shadow until near the close of the war :

REPORT ON IRON-CLAD VESSELS.

NAVY DEPARTMENT,
BUREAU OF YARDS AND DOCKS, *September 16, 1861.* }

SIR : The undersigned, constituting a board appointed by your order of the 8th ultimo, proceeded to the duty assigned to them, in accordance with the first section of an act of Congress, approved 3d of August, 1861, directing the Secretary of the Navy "to appoint a board of three skilful naval officers to investigate the plans and specifications that may be submitted for the construction or completing of iron-clad steamships or steam-batteries, and on their report, should it be favorable, the Secretary of the Navy will cause one or more armored or iron or steel clad steamships, or floating steam-batteries to be built ; and there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, the sum of one million five hundred thousand dollars."

Distrustful of our ability to discharge this duty, which the law requires should be performed by three skilful naval officers, we approach the subject with diffidence, having no experience, and but scanty knowledge in this branch of naval architecture.

The plans submitted are so various, and, in many respects, so entirely dissimilar, that, without a more thorough knowledge of this mode of construction and the resisting properties of iron than we possess, it is very likely that some of our conclusions may prove erroneous.

Application was made to the Department for a naval constructor, to be placed under our orders, with whom we might consult ; but it ap-

pears, that they are all so employed on important service that none could be assigned to this duty. The construction of iron-clad steamships-of-war is now zealously claiming the attention of foreign naval powers. France led off; England followed, and is now somewhat extensively engaged in the system; and other powers seem to emulate their example, though on a smaller scale.

Opinions differ amongst naval and scientific men as to the policy of adopting the iron armature for ships-of-war. For coast and harbor defence they are undoubtedly formidable adjuncts to fortifications on land. As cruising vessels, however, we are skeptical as to their advantages and ultimate adoption. But whilst other nations are endeavoring to perfect them, we must not remain idle.

The enormous load of iron, as so much additional weight to the vessel; the great breadth of beam necessary to give her stability; the short supply of coal she will be able to store in bunkers; the greater power required to propel her, and the largely increased cost of construction, are objections to this class of vessels as cruisers which we believe it is difficult successfully to overcome. For river and harbor service we consider iron-clad vessels of light draught, or floating batteries thus shielded, as very important; and we feel, at this moment, the necessity of them on some of our rivers and inlets, to enforce obedience to the laws. We, however, do not hesitate to express the opinion, notwithstanding all we have heard or seen written on the subject, that no ship or floating battery, however heavily she may be plated, can cope successfully with a properly constructed fortification of masonry. The one is fixed and immovable, and, though constructed of a material which may be shattered by shot, can be covered, if need be, by the same, or much heavier armor than a floating vessel can bear, whilst the other is subject to disturbance by winds and waves, and to the powerful effects of tides and currents.

Armored ships or batteries may be employed advantageously to pass fortifications on land for ulterior objects of attack, to run a blockade, or to reduce temporary batteries on the shores of rivers and the approaches to our harbors.

From what we know of the comparative advantages and disadvantages of ships constructed of wood over those of iron, we are clearly of opinion that no iron-clad vessel of equal displacement can be made to obtain the same speed as one not thus encumbered, because her form would be better adapted to speed. Her form and dimensions, and the unyielding nature of the shield, detract materially in a heavy sea from the life, buoyancy, and spring which a ship built of wood possesses.

Wooden ships may be said to be but coffins for their crews when

brought in conflict with iron-clad vessels; but the speed of the former, we take for granted, being greater than that of the latter, they can readily choose their position, and keep out of harm's way entirely.

Recent improvements in the form and preparation of projectiles, and their increased capacity for destruction, have enlisted a large amount of ingenuity and skill to devise means for resisting them, in the construction of ships-of-war. As yet we know of nothing superior to the large and heavy spherical shot in its destructive effects on vessels, whether plated or not. Rifle-guns have greater range, but the conical shot does not produce the crushing effect of spherical shot.

It is assumed that 4½-inch plates are the heaviest armor a sea-going vessel can safely carry. These plates should be of tough iron, and rolled in large, long pieces. This thickness of armor, it is believed, will resist all projectiles now in general use at a distance of five hundred yards, especially if the ship's sides are angular.

Plates hammered in large masses are less fibrous and tough than when rolled. The question whether wooden backing, or any elastic substance behind the iron plating, will tend to relieve at all the frame of the ships from the crushing effect of a heavy projectile, is not yet decided. Major Barnard says: "To put an elastic material behind the iron is to insure its destruction." With all deference to such creditable authority, we may suggest that it is possible a backing of some elastic substance (soft wood, perhaps, is the best) might relieve the frame of the ship somewhat from the terrible shock of a heavy projectile, though the plate should not be fractured.

With respect to a comparison between ships of iron and those of wood, without plating, high authorities in England differ as to which is the best. The tops of ships built of iron, we are told, wear out three bottoms; whilst the bottoms of those built of wood will outwear three tops. In deciding upon the relative merits of iron and wooden framed vessels, for each of which we have offers, the board is of opinion, that it would be well to try a specimen of each, as both have distinguished advocates. One strong objection to iron vessels, which, so far as we know, has not yet been overcome, is the oxidation or rust in salt water, and their liability of becoming foul under water by the attachment of seaweed and animalcules to their bottoms. The best preventive we know of is a coating of pure zinc paint, which, so long as it lasts, is believed to be an antidote to this cause of evil.

After these brief remarks on the subject generally, we proceed to notice the plans and offers referred to us for the construction of plated vessels and floating batteries.

It has been suggested that the most ready mode of obtaining an iron-clad ship-of-war would be to contract with responsible parties in England for its complete construction ; and we are assured that parties there are ready to engage in such an enterprise on terms more reasonable, perhaps, than such vessels could be built in this country, having much greater experience and facilities than we possess. Indeed, we are informed there are no mills and machinery in this country capable of rolling iron $4\frac{1}{2}$ inches thick, though plates might be hammered to that thickness in many of our workshops. As before observed, rolled iron is considered much the best, and the difficulty of rolling it increases rapidly with the increase of thickness. It has, however, occurred to us that a difficulty might arise with the British Government, in case we should undertake to construct ships-of-war in that country, which might complicate their delivery ; and, moreover, we are of opinion that every people or nation who can maintain a navy should be capable of constructing it themselves.

Our immediate demands seem to require, first, so far as practicable, vessels invulnerable to shot, of light draught of water, to penetrate our shoal harbors, rivers, and bayous. We, therefore, favor the construction of this class of vessels before going into a more perfect system of large iron-clad sea-going vessels-of-war. We are here met with the difficulty of encumbering small vessels with armor, which, from their size, they are unable to bear. We, nevertheless, recommend that contracts be made with responsible parties for the construction of one or more iron-clad vessels or batteries, of as light a draught of water as practicable consistent with their weight of armor. Meanwhile, availing ourselves of the experience thus obtained, and the improvements which we believe are yet to be made by other naval powers in building iron-clad ships, we would advise the construction, in our own dock-yards, of one or more of these vessels, and upon a larger and more perfect scale, when Congress shall see fit to authorize it. The amount now appropriated is not sufficient to build both classes of vessels to any great extent.

We have made a synopsis of the propositions and specifications submitted, which we annex, and now proceed to state, in brief, the result of our decisions upon the offers presented to us :

J. ERICSSON, New York, page 19.—His plan of a floating battery is novel, but seems to be based upon a plan which will render the battery shot and shell proof. We are somewhat apprehensive that her properties for sea are not such as a sea-going vessel should possess. But she may be moved from one place to another on the coast in smooth water. We recommend that an experiment be made with one battery of this description on the terms proposed, with a guaranty and forfeiture in

case of failure in any of the properties and points of the vessel as proposed. Price, \$275,000; length of vessel, 172 feet; breadth of beam, 41 feet; depth of hold, $11\frac{1}{2}$ feet; time, 100 days; draught of water, 10 feet; displacement, 1,255 tons; speed, per hour, nine statute miles.

JOHN W. NYSTROM, Philadelphia, 1216 Chestnut Street, page 1.—The plan of (quadruple) guns is not known, and cannot be considered. The dimensions would not float the vessel without the guards, which we are not satisfied would repel shot. We do not recommend the plan. Price, about \$175,000; length of vessel, 175 feet; breadth of beam, 27 feet; depth of hold, 13 feet; time, 4 months; draught of water, 10 feet; displacement, 875 tons; speed, per hour, 12 knots.

WILLIAM PERINE, New York, 2777 post-office box, presents three plans. The specifications and drawings are not full. The last proposal. (No. 3, page 2), for the heavy plating is the only one we have considered; but there is neither drawing nor model, and the capacity of the vessel, we think, will not bear the armor and armament proposed. Price, \$621,000; length of vessel, 225 feet; breadth of beam, $45\frac{1}{2}$ feet; depth of hold, $15\frac{1}{4}$ feet; time, 9 months; draught of water, 13 feet; displacement, 2,454 tons; speed, per hour, 10 knots.

JOHN C. LE FERRE, Boston, page 9.—Description deficient. Not recommended. Sent a model; but neither price, time, nor dimensions stated.

E. S. RENWICK, New York, 335 Broadway, presents drawings, specification, and model of an iron-clad vessel of large capacity and powerful engines, with great speed, capable of carrying a heavy battery, and stated to be shot-proof and a good sea-boat. The form and manner of construction and proportions of this vessel are novel, and will attract the attention of scientific and practical men. She is of very light draught of water; and on the question whether she will prove to be a safe and comfortable sea-boat we do not express a decided opinion. Vessels of somewhat similar form, in that part of vessels which is immersed, of light draught of water, on our Western lakes, have, we believe, proved entirely satisfactory in all weathers. To counteract the effect of the waves, when disturbed by the winds, by producing a jerk or sudden rolling motion of flat, shoal vessels, it is proposed to carry a sufficient weight above the centre of gravity to counterpoise the heavy weight below, which is done in this ship by the immense iron armor. If, after a full discussion and examination by experts on this plan, it should be decided that she is a safe vessel for sea service, we would recommend the construction upon it of one ship, at one of our dock-yards. The estimated cost of this ship, \$1,500,000, precludes action upon the plan until further appropriations shall be made by Congress for such ob-

jects. Time not stated; draught of water, 16 feet; displacement, 6,520 tons; speed per hour, at least 18 miles.

WHITNEY & ROWLAND, Brooklyn, Greenpoint, page 13, propose an iron gunboat, armor of bars of iron and thin plate over it. *No price* stated. Dimensions of vessel, we think, will not bear the weight and possess stability. Time, 5 months. Not recommended. Length of vessel, 140 feet; breadth of beam, 28 feet; depth of hold, $13\frac{1}{2}$ feet; draught of water, 8 feet.

DONALD MCKAY, Boston, page 16.—Vessel, in general dimensions and armor, approved. The speed estimated slow. The cost precludes the consideration of construction by the board. Price, \$1,000,000; length of vessel 227 feet; breadth of beam, 50 feet; depth of hold, $20\frac{1}{2}$ feet; time, 9 to 10 months; draught of water, 14 feet; displacement, 3,200 tons; speed per hour, 6 to 7 knots.

WILLIAM H. WOOD, Jersey City, N. J., page 14.—Dimensions will not float the guns high enough. Not recommended. Price, \$255,000; length of vessel, 160 feet; breadth of beam, 34 feet; depth of hold, 22 feet; time, 4 months; draught of water, 13 feet; displacement, 1,215 tons; speed not stated.

MERRICK AND SONS, Philadelphia, pages 7 and 8.—Vessel of wood and iron combined, This proposition we consider the most practicable for heavy armor. We recommend that a contract be made with that party under a guaranty, with forfeiture in case of failure to comply with the specifications; and that the contract require the plates to be 15 feet long and 36 inches wide, with a reservation of some modifications, which may occur as the work progresses, not to affect the cost. Price, \$780,000; length of vessel, 220 feet; breadth of beam, 60 feet; depth of hold, 23 feet; time, 9 months; draught of water, 13 feet; displacement, 3,296 tons; speed per hour, $9\frac{1}{2}$ knots.

BENJAMIN RATHBURN, page 20.—We do not recommend the plan for adoption. Price not stated; length of vessel not stated; breadth of beam, 80 feet; depth of hold, 74 feet; time not stated; draught of water, 25 feet; displacement, 15,000 tons; speed not stated. Specifications incomplete.

HENRY R. DUNHAM, New York, page 11.—Vessel too costly for the appropriation; no drawings or specifications; not recommended. Price, \$1,200,000; length of vessel, 325 feet; breadth of beam, 60 feet; depth of hold not stated; time, 15 to 18 months; draught of water, 16 feet; displacement not stated; speed per hour, 12 miles.

C. S. BUSHNELL & Co., New Haven, Conn., page 121, propose a vessel to be iron-clad on the rail and plate principle, and to obtain high speed. The objection to this vessel is the fear that she will not float her

armor and load sufficiently high, and have stability enough for a sea vessel. With a guaranty that she shall do these, we recommend on that basis a contract. Price, \$235,250; length of vessel, 180 feet; breadth of beam, — feet; depth of hold, 12 $\frac{3}{4}$ feet; time, 4 months; draught of water, 10 feet; displacement, — tons; speed per hour, 12 knots.

JOHN WESTWOOD, Cincinnati, Ohio, page 17.—Vessel of wood with iron armor; plan good enough, but the breadth not enough to bear the armor. No detailed specifications; *no price or time* stated; only a general drawing. Not recommended.

NEAFIE & LEVY, Philadelphia, page 5.—No plans or drawings, therefore not considered. Neither *price nor time* stated. Length of vessel, 200 feet; breadth of beam, 40 feet; depth of hold, 15 feet: draught of water, 13 feet; displacement, 1,748 tons; speed per hour, 10 knots.

WM. NORRIS, New York, 26 Cedar Street, page 6.—Iron boat without armor. Too small, and not received. Price, \$32,000; length of vessel, 83 feet; breadth of beam, 25 feet; depth of hold, 14 feet; draught of water, 3 feet; displacement, 90 tons; speed not stated.

WM. KINGSLEY, Washington, D. C., page 10, proposes a rubber-clad vessel, which we cannot recommend. No price or dimension stated.

A. BEEBE, New York, 82 Broadway, page 18.—Specifications and sketch defective. Plan not approved. Price, \$50,000; length of vessel, 120 feet; breadth of beam, 55 feet; depth not stated; time, 100 days; draught of water, 6 feet; displacement, 1,000 tons; speed per hour, 8 knots.

These three propositions recommended, viz.: Bushnell & Co., New Haven, Connecticut; Merrick & Sons, Philadelphia; and J. Ericsson, New York, will absorb \$1,290,250, of the appropriation of \$1,500,000, leaving \$209,750 yet unexpended.

The board recommends that armor with heavy guns be placed on one of our river craft, or, if none will bear it, to construct a scow, which will answer to plate and shield the guns, for the river service on the Potomac, to be constructed, or prepared by the Government at the navy-yard here, for immediate use.

We would further recommend that the Department ask of Congress at its next session, an appropriation, for experimenting on iron plates of different kinds, of \$10,000.

All of which is respectfully submitted,

JOSEPH SMITH,
H. PAULDING,
C. H. DAVIS.

Hon. GIDEON WELLES, Secretary of the Navy.

The report of this board was followed by contracts for the building of three iron-clad vessels. One was a small corvette called the *Galena*, another was the *New Ironsides*, and the third the first *Monitor*. The *Galena* was plated with iron about three inches thick, and this armor was found to be nearly useless as a defence against heavy guns, for the vessel was nearly ruined in a single attack upon Fort Darling, 10-inch shot breaking through her armor and shattering her hull almost beyond repair. The frigate *New Ironsides*, built at Philadelphia by Merrick & Sons, has proved to be one of the most efficient, if not the most formidable broadside iron-clad in the world at the time she went into service. Her superior power, however, consisted not in the structure of her hull or in any peculiarity of her armor, but in her truly American battery of 11-inch guns. This battery was almost irresistible in an attack upon a fort in this respect; the men could not stand to their guns under the terrible hail of her shot, but she has never been tested by such a fire as the *Monitors* have endured. She has seldom, if ever, engaged a battery at a less distance than a mile. A more particular description of this ship will be given hereafter.

But by far the most important contract, as events have shown, was that for the building of the vessel afterward named "*The Monitor*." In that curious, insignificant looking craft, which bore no resemblance to what men had been taught to call a ship, was the germ of that American thought which virtually annihilated the old navies of the world. As no invention of modern times has created a greater sensation than this *Monitor-ship* of Ericsson, as no one is likely to exert so wide an influence upon the art of war, and consequently upon the relative power of nations, and as no one has met with a severer criticism or harsher censure, it is thought proper to devote a chapter to a discussion of the peculiarities and the advantages of this new American war-ship before entering upon the general narrative of the operations of the Navy during the war.

If the country is called upon to decide whether the Navy Department was reckless and visionary, or prudent and far-seeing in adopting the *Monitor-ship*, it is right to consider what they have done and what the *Monitor* now is, because the original and essential idea of the invention remains the same

through all the modifications and every improvement since made, and these were all involved in the original conception. The capabilities, the grand scope of the germ-thought of the Monitor plan induced the Department to adopt it, and events have justified the decision.

The original "cheese-box on a raft," as it was called, the Dictator and the Puritan, the Monadnock and the Miantonomoh, the Kalamazoo and her sister ships, though differing widely from each other, yet all are Monitors, modifications of the one central thought.

CHAPTER XII.

THE INVENTOR OF THE MONITOR.

THE forces employed in a great war are not often estimated according to their real importance ; and this is particularly so in a country like our own, where the originating and sustaining power is not with the rulers but the people. The great underlying force of our struggle was with the people themselves. They supplied the wealth, the mechanical force and skill, the thinking power that created the instruments ; and, above all, the moral force that gave not only impulse but steadiness to the Government. The people have received their reward in the common glory of success, in the ennobling of the national character, and in the increased stability and security of our institutions.

The common soldiers and sailors, and the subordinate officers form another great power of war, and in no nation as yet have they obtained their proper reward. The superior and successful officers are in the main duly honored, and this is well ; such men should not lose the full reward. The statesmen who, at the head of affairs, direct unseen these national forces, do not often receive from the men of their own times the honor really due. When subsequent history discloses the secrets of cabinet councils, then the statesmen of a previous age are weighed and assigned to their proper place.

In this age, when war is not only a science, but when battles, especially on the water, are decided by the use of scientific machinery, the man who invents a weapon which both for offensive or defensive war is decidedly superior to any known before, becomes himself a great war power, one of the forces

which shape the character of an age. And inasmuch as the inventor of an art or a machine which revolutionizes the opinions and practice of a nation, seldom has the wealth by which its value can be tested on the large scale, they who by patronage and capital supply the needed means and share the risks and the odium of the novelty, deserve also an honorable place by the side of the inventor himself.

Ericsson* will be recognized by impartial history as one of the great powers of the American war; and they who, like Griswold and his associates, stood by the inventors of the country and enabled them to bring their new weapons to the practical test of battle, should receive the honor due to them as among the causes which, lying back of the battle and concealed from the public, contributed largely to the victory. This is equally true of those who in the West brought to the aid of their country their skill, their capital, and their genius.

It is as the inventor of the Monitor that Captain Ericsson will be remembered and placed among those whose genius has revolutionized the opinions and practice of the world. Valuable as the caloric engine may be, it has not superseded steam as a motive power; and important as the screw-propeller undoubtedly is, it is only one of the methods by which steamers are driven, and the side paddle-wheel still maintains its place;

* JOHN ERICSSON was born in the province of Wermeland, Sweden, in 1803. The son of a mining proprietor, his earliest impressions were derived from the engines and machinery of the mines.

His extraordinary inventive genius developed itself very early in life. When only twenty-three years old he obtained leave of absence from the Swedish army for the purpose of introducing in England a flame-engine, which he had already exhibited in his native country. He was the inventor and constructor of the novelty engine, which was one of those which competed for the prize offered for the best locomotive by the directors of the Liverpool and Manchester Railway in 1829. An artificial draught was the distinguishing feature of this machine. This feature is still retained in all locomotives. He next produced a steam fire-engine, and then soon after brought out his famous caloric engine, some 2,000 of which are now in operation.

He was the inventor of the propeller, and of that new arrangement of steam machinery in war-vessels which has revolutionized the navies of the world. The first steamship built with the new propelling machinery was the Princeton, and America thus became the leader in the great change. He received almost countless testimonials to his genius and the value of his inventions, in the form of medals and memberships in the most important societies in Europe, and was most widely and favorably known before his name became connected with our iron-clad navy.

100

100

100



W. Harrison

but the essential features of the Monitor ship seem destined to modify or displace all other forms of war-vessels intended for heavy ordnance. Every experiment thus far made, either here or in Europe, tends toward this result. It is conceded that no broadside ship now known can float armor thick enough to resist the 15-inch or 20-inch smooth-bore, or the 12-inch rifle, while no effort yet has succeeded in devising a casemate which is equal to the circular one. Unless the progress of events is soon arrested by some new discovery, the sailing ship as a war-ship, the wooden ship, for fighting, and the broadside iron-clad, will all disappear among the rubbish of the past; and the Monitors, for a time at least, will form the world's weapon for naval war.

What new form of engines of destruction the wonder-working modern mind may yet produce none now can tell. Monitors may be and probably will be displaced by some new weapon which may better ward off or deal the death-blow, but this would not dim the fame of Ericsson. It is sufficient to secure his renown that he met the want of the age in which he lives, and gave to this young nation in its hour of peril an instrument which not only shielded her from the blow meditated in Europe, but annihilated that naval power with which France and England were holding the rest of the world in subjection.

The Monitor and her immense guns have broken the right arm of despotism both here and in Europe. They may be classed among the great levelling and emancipating forces of the world. They have made, at least for a time, the weaker nations equal in some important respects upon the sea to the strongest; and once delivered from the pressure and the fear of the great navies, they will gain confidence and moral power. A nation owning a single first-class Monitor is above being despised, even by England.

It is doubtless true that the powerful and wealthy nation may in time restore the former inequality by the number of its new ships and the power of its guns; still the lesson of the Monitor will not be forgotten, and perhaps the torpedo or some still more terrific agent may once more place the squadrons of the strong at the mercy of the weak; and it seems unlikely now that any one great naval power will hereafter dominate the seas as England heretofore has done.

CHAPTER XIII.

THE MONITORS.

THE Monitor form of a war-ship is an original invention, the embodiment of a before unknown idea. It seems to stand unconnected with all the previous thinking of the world in regard to naval architecture. Instead of adopting or imitating any form then known, it rejected them all. It is scarcely too much to say that it is the opposite of them all. A ship that could fly through the air would be scarcely more removed from the general idea of the world than is the almost submarine Monitor ploughing through or diving under the waves. The contrast is not less between the hundred guns of the common line-of-battle ship and the two guns of the revolving battery. It marks an era in the world's history. It belongs to the highest order of genius; and they were men of genius, or in profound sympathy with genius, who had the boldness to adopt the plan.

In order both to weigh properly the objections which have been made against these new engines of war, and to estimate aright their advantages, it is necessary first of all to obtain a clear idea of what a Monitor is. What are its distinctive and essential features, without which it would not be a Monitor, and retaining which it still remains a Monitor, though modified in many unessential particulars? First and most important is the revolving turret, which shields the battery; and second, the submerging of the hull until the deck is brought within a few inches of the surface of the water, this distance varying somewhat according to the size of the vessel, but presenting in all only a narrow line instead of the lofty broadside to an enemy's

fire. The advantage of this will be more particularly shown hereafter.

In mentioning the submerging of the hull as a feature of the Monitor, it is not intended to state that this is peculiar to this form of war-ship; but the true idea of a Monitor cannot be carried out except where the deck lies nearly level with the water. A broadside ship might carry a revolving turret, and to that extent might be called a Monitor, but the true Monitor has her hull nearly all below the water-line, and therefore beyond the reach of shot.

The Monitor idea then admits of any change or improvement which leaves the hull nearly submerged and retains the revolving turret. This shows at once how entirely irrelevant much of the criticism has been by which Ericsson's invention has been condemned. This criticism has overlooked almost entirely the essential idea of the invention, and attacked the minor defects and mistakes which are unavoidable in carrying out so novel a conception. It was unreasonable to suppose that an idea which set aside all the previous thinking of the world in regard to ships, and rejected all known forms of construction, should assume at the first trial a practical form so complete as to require no improvement; and especially when new machinery was to be devised for almost every operation of the ship and her guns.

Upon the appearance of the first Monitor her form was ridiculed and condemned, and the whole Monitor idea cast contemptuously aside, as if the peculiarities spoken of were the essential features in the plan. Her armor was so arranged as to project on all sides, so as to protect both her propeller and the hull for some distance below the water-line. This was seized upon, all its disadvantages enumerated and exaggerated, and then the invention was condemned as if this "overhang" constituted a Monitor. But this was not an essential part of the plan, and has been dispensed with in the more recently constructed ships. The criticisms were valid against the "overhang," but not against a Monitor. The Miantonomoh, without the projecting armor-shelf, is a far better expression of the true Monitor idea than was the little craft that defeated the Merrimack.

It was declared that the Monitors were all slow and unwieldy, that they were worthless as sea-boats, and especially as cruisers. But the first Monitors were only a special application of the general idea. The want of the Government just then was some invulnerable floating batteries, and such these Monitors were. They were floating revolving forts; and they not only answered this special purpose as no other form of ship could have done, but they proved themselves to be admirable sea-boats, and their speed was fully equal to that of the New Ironsides. It was all that was needed for the service required of them. But the Monitor is not necessarily a slow ship. The Monadnock and the Miantonomoh are among the fastest vessels in the Navy, and are quite equal, as is believed, in this respect, to the average speed of the iron-clads of Europe. They are also first-class sea-boats, many officers and men preferring them at sea to a broadside ship of any kind. They were condemned as unhealthy, but the latest medical reports would indicate that they are even more healthy than other ships. Because the first one was lost, it was said they were good for nothing except to go to the bottom, as if no vessel but a Monitor had ever foundered at sea.

When the fleet of iron-clads failed to capture Charleston, and some of them were temporarily disabled, their worthlessness was again proclaimed through the land, and nearly all seemed to forget the fact that these vessels were the next day in good fighting trim, after having endured a fire that would have sunk the whole broadside fleet of Europe, and this with only trifling injuries to the ships, and with no loss of life. The first attack in Congress, followed by the censures of an influential press, had unfitted the country for forming a candid judgment. In all their condemnation of the Monitors, and censures of those who adopted them as a part of our national defences, men seemed to forget that it was a Monitor, and a very imperfect and hastily constructed one, which arrested the ruin of our fleet, and at a most perilous moment decided the contest in our favor.

The country did not know at the time, and perhaps will never fully understand how much it owed to those Senators and members of the House of Representatives by whom this current of wrong opinions and causeless prejudice was first arrested at

the capitol, and through whom the truth, against determined opposition, was gradually brought to the knowledge of the people.

Such was the well-spread distrust, and even hostility to the Navy Department and its plans, that it required the most positive convictions, and a willingness to risk personal popularity for the country's safety, to induce any man, at that time, to stand up and defend the Navy from the persistent attack of some of the most trusted and influential members of the Senate and the House. Had this attack succeeded, and success at one moment seemed almost certain; had the policy of the Department been repudiated; had its plans for iron-clads and ordnance been rejected, so far as human wisdom can judge, looking back on the past, the rebellion must have succeeded.

Fortunately for the country, God raised up men whose statesmanship was equal to the hour, and who had the sagacity to perceive the real exigency of the country, and who saw that the plans of the Department were the only available ones which promised success. Foremost in this contest for the right and the safety of the country were Hon. J. W. Grimes, Senator from Iowa, and Hon. A. H. Rice, member of the House from Massachusetts; and with them, and perhaps equally entitled to the country's grateful remembrance, were Hon. Messrs. F. A. Pike, of Maine, H. T. Blow, of Missouri, and Hon. J. A. Griswold, of New York, who, by their public speeches and labors in Committee, both shielded the Department, began the creation of a true public sentiment in regard to the Navy, and materially aided in saving the country from disaster in one of the most critical periods of the war. It has been said, that when Cervantes "smiled Spain's chivalry away, he broke the right arm of his own country." Had Mr. Hale and his associates succeeded in their ridicule, they would have demolished with a sneer the main defence of the nation.

Having shown what the essential characteristics of a Monitor are, it is but just to state, that while the original conception and a part of the improvements are due solely to the genius of Ericsson, so that his name holds the same relation to the Monitor that Watt does to the steam-engine, and Fulton to the steamboat, very important changes were suggested by men of

nautical experience in the Navy Department; and it is probable that, next to Ericsson, the Assistant Secretary has done more than any other man in bringing this class of ships to their present form and efficiency, while Admiral Smith has also contributed to the same great national end. Nor do these gentlemen believe that Ericsson's idea has been even yet fully developed. They think that it involves more than as yet has been exhibited in practice, and that from it a far more formidable war-ship than any now afloat will hereafter be produced.

These statements show that much of the hostile criticism of the Ericsson invention had no relation to the real merits of the plan, but were rather directed to errors in construction, afterward remedied, while much also arose from a misunderstanding of the facts. The reader will now be prepared to consider the advantages of this new war-engine which, like the steamboat, the locomotive, and the telegraph, has come forth to revolutionize the opinions of the world.

The first and principal one, upon which the rest depend, is the revolving turret, containing the battery by which the guns and their shot-proof shield turn together, and so that the guns can be trained to any point in the horizon without regard to the position of the ship.

This feature alone distinguishes the Ericsson vessel from every other known invention. It has been claimed that Captain Coles, of the British Navy, was the original inventor of the turreted ship. Even if this were so, it would detract nothing from the fame of the American inventor, or from the merits or originality of his plan. A Monitor is indeed a turreted ship, but a ship with a stationary turret is by no means a Monitor. The turreted ship of Captain Coles, of the British Navy, is simply a broadside vessel with stationary turrets upon the deck, and these might perhaps better be named circular casements in order the more readily to distinguish them from the revolving turrets of Ericsson. Captain Coles's ship possesses neither of the chief characteristics of a Monitor. Neither is a vessel a Monitor which has a stationary circular shield for the battery while the guns are mounted upon a turn-table within. This form was proposed to avoid the danger of having a revolving turret jammed by shot, as was the case with one or more at Charles-

ton. But this difficulty has been provided for by the addition of an outer ring enclosing the base of the turret, by which it is effectually guarded. Neither in the stationary turret of Captain Coles, nor in the turret with the revolving table, can the guns be trained to any point without shifting the position of the ship. The gun can be varied only to the extent allowed by the traverse circle, and the port must be enlarged to correspond, so as to admit the different positions of the gun, thus increasing the exposure of the men; while the Monitor port is but little larger than the muzzle of the gun. If the expedient is adopted of mounting the guns so as to be fired through three ports as in the Stonewall and some of our Western iron-clads, then not only is the exposure increased by the three ports, but it is a clumsy contrivance compared with the revolving turret.

In the Monitor, whatever the position of the ship, the guns revolving with the turret can be trained instantly to any point of the horizon, sweeping round the entire circle. Even were the Monitor hard aground, it would scarcely diminish her defensive power, for from whatever quarter her adversary might approach she would be equally under her guns. A Monitor aground is a revolving fort of the most effective character. The advantage of this feature will appear in a subsequent chapter, describing an attack upon a Monitor aground by some land forces on Red River. The importance of this feature of the invention cannot be easily overrated. It distinguishes it as clearly from every other form of turreted ship as it does from a broadside vessel. A second advantage is gained from mounting the guns in the centre of the vessel. This alone renders it possible to use at sea the new heavy American guns. Guns mounted on broadside act with their weight upon a lever, the length of which is equal to the distance from the centre of the ship to the line on which the guns stand, and the tendency of this immense weight is either to roll the ship under or wrench her timbers apart. It is easy, therefore, to see that no vessel yet built could bear the strain of fifteen-inch guns mounted on her side twenty-five or thirty feet outward from the line of her keel. They *would roll her under, or tear her in pieces*. But in a Monitor the guns are mounted directly over the keel, and therefore the ship has only to bear their weight. Besides, the Monitor, as

will be more particularly shown hereafter, scarcely pitches at all, and rolls but slightly, and the guns rest comparatively quiet over the ship's centre of gravity. This steadiness of the Monitor at sea offers another very great advantage in the training of her guns.

One of the objections strenuously urged against them was that because the gunners are enclosed in the turret, and the port-holes are scarcely larger than the muzzles of the guns, that therefore no accuracy of aim can be obtained. But the exact contrary of this is true, for officers who have commanded Monitors in action inform us that, owing to the steadiness of the ship, the accuracy of fire is nearly the same as if the guns were in battery on shore. Nor is this all. The Monitor form of war-ship, by the mounting of the guns over the keel of the vessel, gives unlimited opportunity to carry out the American idea of *condensing* the weight of a broadside into a few heavy shot, substituting the smashing blow for greater penetration by the swifter and smaller shot.

Another and essential feature of a perfect Monitor is that the deck lies so near the water-line that a narrow strip only of her hull is above the surface. This enables such a ship to carry a perfectly shot-proof armor on every part exposed to an enemy's guns, while such a thickness of iron over the whole side of a *broadside ship* would send her to the bottom the moment she was launched. Again, the Monitor form presents a mark so exceedingly small compared with the huge broadside, as to give her a very decided advantage in battle. These two features, the ability to carry an invulnerable armor on the part exposed, and the small target offered to an enemy, are so important as to require particular consideration. The most formidable iron-clads of the British Navy are in size and general construction represented by the Warrior. England has more efficient vessels than she is, but the Warrior may properly be used to show the difference of exposed surface in a first-class broadside frigate, and a Monitor able to cope with her. The Warrior is three hundred and eighty (380) feet long, and she floats, according to the scale of an official drawing, twenty feet out of the water. The area of her broadside exposed to shot is, therefore, seven thousand six hundred (7,600) square feet. The length of the first

Monitor was one hundred and eighty-five (185) feet, of the second class two hundred (200) feet, of the third class two hundred and twenty-five (225) feet, of the Monadnock class two hundred and fifty-seven (257) feet, and of the Dictator three hundred and fourteen (314) feet. These ships, upon the average, do not float much more than one foot above the water when in fighting trim; and the immense advantage which they have over a broadside antagonist is readily seen. But the comparison can be made with perfect accuracy between such a ship as the Warrior and one of our double-turreted Monitors of the Monadnock class. The Miantonomoh is of this pattern. She is, in round numbers, two hundred and fifty-seven (257) feet long, and her deck, when prepared for action, rises only twenty-four inches above the water. Hence the surface exposed in her broadside is only five hundred and fourteen (514) square feet. Add to this the turrets, each twenty-two feet in diameter and nine feet high, equal to one hundred and ninety (190) square feet each more, and it is seen that a Monitor of this size presents in all only eight hundred and ninety-four (894) square feet as a target to the enemy's fire, while the Warrior offers seven thousand six hundred square feet. Besides this, it must be remembered that a surface two hundred feet long and only two feet wide, if visible at all at the distance of a mile, or even a thousand yards, appears only as a line of that length, while, unless a shot strikes a turret exactly in the centre, it is almost certain to be turned aside. The chances then of hitting a Monitor with a damaging shot from a high broadside vessel in motion, and rolling or pitching with the sea, are very few. Nor must it be forgotten that the reason why our Monitors have been struck so often is, that they have fought against forts and batteries whose guns were stationary, and had been previously trained with the utmost possible precision upon points where the vessels were detained by obstructions placed for this purpose. This will be fully shown in the description of the obstructions in Charleston harbor. It has been said that the greater number of guns of the broadside ship will more than compensate for the inequality of size. But no shot from guns yet mounted in broadside would harm either the turret or the sides of the Miantonomoh, though every one of a broadside should strike at point-

blank range. Her side armor is equal to nearly eleven inches of solid iron; and then, inasmuch as her deck is solid wood and iron down to the water-line, the backing of her side armor is really fifty-two feet thick, or the whole width of the ship. No shot yet fired from a broadside ship would injure her turret, while at a thousand yards such a Monitor, from her great steadiness in the water, should strike a ship like the Warrior with four 15-inch shot at every discharge of her guns at the distance of fifteen hundred yards. The effect of these shot upon any armor which a broadside vessel can float will be shown hereafter, and the proof will be presented that any one of our Monitors mounting 15-inch guns would sink any ship of the Warrior pattern.

In this comparison of surfaces exposed in a broadside ship and a Monitor, it should be stated, that while it was assumed in the calculation that the Miantonomoh rises two feet out of the water, many of our turreted ships have their decks only about twelve inches above the water-line, and that the Dictator, the largest yet finished (February, 1866), is very little higher than this.

To place this subject in a still clearer light, let it, for the sake of a comparison, be supposed, though it is not true, that the broadside frigate with her greater number of guns would strike the small target as often as the Monitor could the large broadside with her four guns, let the reader consider what kind of a ship it must be, and what guns she must carry, in order to match the turreted vessel. The broadside of the Warrior presents a surface to fire eight and a half or nine times as large as the Miantonomoh. To equal this Monitor, the English frigate should carry on a side eight and a half times the number of 15-inch guns which the Monitor mounts. This would require thirty-four on a side, or sixty-four 15-inch guns in all. In addition to this she must be covered all around with armor eleven inches thick. It is not possible to comply with either of these conditions, and hence the difficulty, in the present state of science and invention, of constructing a broadside ship that can cope with our double-turreted Monitors. No English or French ship yet launched can carry our 15-inch gun in broadside.

Another very decided advantage afforded by Ericsson's in-

vention is the small number of men required for the working of the ship and her guns. The crew of the *Warrior* is stated by English authorities to be seven hundred men, while the *Miantonomoh* requires but two hundred, and the single turrets are worked by one hundred men.

Add to this the almost entire safety of the men, and it will be seen that this is not the least recommendation of the American war-ship. Such are the chief features of Ericsson's invention, clearly marking it as a new thought, which, by changes in the application of its principle that experience has suggested, is now embodied in the most formidable war-vessels of the world.

So clear and decided were the convictions of the Secretary and his associates that they persevered through opposition, misrepresentation, and ridicule, until their policy was triumphantly vindicated by results. Perhaps the noblest triumph of the Navy has been announced while this paragraph was being written (February, 1866), the official announcement that the French emperor is preparing to withdraw his troops from Mexico. If this is true, then one of the main reasons for this course beyond all doubt is the power of the American Navy, and the well-known fact that our iron-clad fleet cannot be safely attacked. Besides, all Europe knows that we have nearly ready for sea at this date the most powerful steam-cruisers in the world. May the nation learn from this a lesson in regard to the importance of the Navy, for on it must depend hereafter the peaceful solution of foreign complications! If we maintain a Navy suited to the power and resources of the country, no foreign nation will dare attack us, and therefore we shall have peace.

No American statesman should be deluded by the idea that peace can be long maintained between this republic and Europe except by a Navy that is able to defend us against the united attack of every Latin power in Europe, aided by England. This will seem to many perhaps a reckless assertion, but it is not made without careful consideration. France controls every one of these Latin powers; and the principal ones, as Spain and Italy, are rapidly increasing their navies—iron-clad navies. France will be able to combine against us, whenever she chooses, Spain, Italy, and England.

We should not forget how recently the fleets of France, Spain, and England, appeared on American shores, leagued in a conspiracy against the United States, which has failed only because of our new war weapons, our sudden development of our military power, and our success in putting down the rebellion. The antagonisms between this republic and the powers of Western Europe are sharp, active, irreconcilable, and enduring. There is a religious antagonism, and one of races also. Louis Napoleon, in an unguarded moment, declared these to be the powers that originated the attack on Mexico. He went, he said, to restore on this continent the prestige of the Latin race, and, of course, the Latin Church. For the very same reasons he produced the war against Russia, to restore in the East the prestige of the Latin race.

This intention to restore both in Europe and here the old control of the Latin race over the Anglo-Saxon, and of the Latin Church over the Protestant, will not be abandoned until a decision has been reached either by a great war or by such an exhibition of power on our part as would forbid all hope of a successful attack. This involves also a political antagonism. The religious sentiment of the Latin race clothes itself in despotic forms in Church and State alike. It knows no other form of civilization, it rejects all else. The American religious sentiment embodies itself in free institutions—political, social, and religious. It is a direct, ever-acting antagonism to the systems and sentiment of Western Europe. The forces on both sides therefore are aggressive, and sooner or later the conflict must come, unless it is warded off by the manifest strength of our Navy.

Again, the commercial and manufacturing antagonism is also very strong and very active; and England, whose very existence is wrapped up in these interests, will attack us whenever she dares to do so, in the hope of crushing a rival. It is not necessary to build in advance a thousand ships, but our home manufactures should be cherished. Yards should be provided, materials accumulated, and machinery erected, which will enable us to compete with Europe in the production of ships. We must become a great naval power, or be at the mercy of Europe. Those who have introduced the Monitors not only indorse all

that has thus far been stated here, but they are fully prepared to go much further. After having tested such vessels, as the *Monadnock* and *Miantonomoh*, especially after their performance at sea has been watched and reported by experienced naval officers, those in whose judgment we have reason to confide, are perfectly willing to commit themselves to the opinion that the Monitor idea is destined to work a revolution not only in regard to coast and harbor defences, but in the whole system of naval architecture in the world.

Taking this general view of the subject, the submerged or nearly submerged hull is the central thought. In the severest gale the agitation of the water reaches but a few feet below the surface, and it therefore is quite evident that if a vessel could be moved beneath the waves instead of upon them, that her path would be through calm water, however rough it might be above her. In proportion as the hull of a vessel is thus sunk into the calmer water, while a diminished surface is exposed to the stroke of the surface-wave, will be her steadiness and safety. This principle has been illustrated by reference to the elephant, who swims beneath the surface, sinking his huge bulk until it floats in comparatively calm water, and communicating through his uplifted trunk with the upper air.

A properly constructed Monitor therefore might be called, not inaptly, an iron sea-elephant, communicating with the upper air through its turret and pilot-house, while the hull is mostly beneath the water. Holding for a moment the idea of the submerged hull separate from all others, the inquiry is suggested, why the merchant-ship and even the sailing vessel should not also be constructed upon the same principle? Sails or steam will propel a vessel whose deck lies level with the water, to say the least, as rapidly as when her sides rise twenty feet above, while her steadiness would of course be greatly increased by sinking her hull into the calm water below. As a matter of fact, it is well known that the Monitors in a gale are the steadiest vessels afloat. The wear and tear of a large, high, broad-side ship, by the strokes of the sea upon her lofty sides, and by the strain of her pitching and rolling, is of course very great. But this smiting of the waves upon the sides, and most of the injurious motion of a ship, would be avoided by leaving only the

deck above water. If the principle here assumed is correct, then perhaps it may be expected that the time will come when the submarine ship, or one nearly so, will supersede all other forms. What particular shape the principle may in practice assume cannot now perhaps be foreseen; but experiments already made have, in the opinion of good judges, shown conclusively not only that the Monitor can live in a heavy sea, but that the Monitor principle will secure the best sea-boat yet devised by man.

There need be no fear in reference to such a ship of the most appropriate form. The fact is already established that a vessel with her deck at the surface of the water has buoyancy enough to carry guns and stores, or a cargo; that she will go through the waves or under them far more easily and steadily than she could ride over them, and the ingenuity of man will soon devise the means of giving speed and comfort to the novel ship. Indeed, as has been already stated, our latest-built Monitors are among our fastest war-ships, and many officers and men prefer them to any other ship, because there is in them far less of discomfort and exposure.

CHAPTER XIV.

THE DIFFERENT CLASSES OF MONITORS.

THE next step in this history will be to present a general description of the different classes of Monitors, and what they have performed during the war will be set forth hereafter in the narrative.

In the perilous hour which has been described, when the Merrimack was being hastened on to completion in the hope of destroying our Navy, laying waste our cities, and ending the war, God brought the genius of Ericsson to the aid of the nation; but genius without money could avail nothing. The Government, through a mistaken trust that war had ceased, had no means of its own for constructing an iron-clad. It had neither the proper yards nor suitable machinery. It was in precisely the condition in which the next great war will find us, if a narrow policy in regard to the Navy should rule the councils of the nation instead of a generous and cordial support. It was the state in which the nation will be ere long if we forget that in a foreign war a navy, and not an army, must fight the battles.

In this emergency individuals were found willing to risk their capital and their business reputation in constructing, at their own risk, the nondescript vessel. Such was the state of public opinion that the Department felt compelled to guard the contract with some stringent conditions. The report of the board of officers bound the Secretary to this course so far as its authority went. While in the contract for the New Ironsides the contractors were required simply to comply with the specifications furnished, and while her plan was proposed by the

board as "the most practicable one for heavy armor," thus throwing some distrust at the outset upon the turreted battery, the contractors for the *Monitor* were bound under forfeiture to guarantee against "failure in any of the properties and points of the vessel as proposed." For these restrictions the Navy Department has been censured, and the Secretary has been reproached with permitting a great national battle to be fought by a ship which at the time was the property of individuals. But these conditions were imposed by the report of the board, and with the well-known feelings and opinions in and out of Congress the Secretary perhaps was not inclined to assume a responsibility not properly his. Manifestly, he could do no less than to require that the novel battery should perform what the inventor and contractor promised; there was no time for any experiments with her after she was ready for sea, and, in fact, it was only by a trial in battle that conclusive proof could be given that the contract was really fulfilled. As a matter of course, therefore, she was not fully paid for until after her trial in the fight with the *Merrimack*.

It is always interesting to learn how great inventions have originated; under what circumstances, by what influences, and by what men they have been introduced among the forces of the world. The birthplace and early history of a great idea are at least as important as those of a great man. In order to present these facts in regard to the *Monitor*, it is necessary to go a little back of some statements already made. In September, 1861, C. S. Bushnell, of New Haven, the gentleman who contracted to build the corvette *Galena*, was conversing with Ericsson in regard to iron-clad batteries, when he took from a drawer a plan of one which he at some former period had conceived and sketched for future reference. It was substantially the plan of the original *Monitor*. Mr. Bushnell was most favorably impressed with the novel idea, and urged Ericsson to go to Washington and present the plan to the Secretary of the Navy. For some reason this proposition was declined, and at length Mr. Bushnell asked and obtained permission to take the drawing himself to the Secretary. Mr. Welles was pleased with the idea, but few of the naval officers and constructors at that time regarded the plan with favor. Naturally enough they felt un-

willing to risk a reputation honorably earned, and which was their all, upon this novel weapon entirely untried, and which, however perfect it might be in theory, they feared might fail in the stern practice of a fight. From the first, however, Admiral Joseph Smith gave to the Monitor battery his sanction and earnest support, and aided the Secretary in his effort to bring out the new invention to the extent of his influence. Among many that doubted, he stands conspicuous as the early and steadfast friend of the iron-clad navy. He presents one of the few examples where men rise above the trammels of early education and even of professional training, and embrace late in life entirely new ideas. A few facts in regard to Admiral Smith* will doubtless be interesting to the reader, inasmuch as he has been an actor in both our great naval wars.

* Rear-Admiral JOSEPH SMITH was born in 1791, in Hanover Old Colony, Massachusetts. He entered the Navy as a midshipman, in January, 1809. He has served in the several grades of midshipman, master, commandant, captain, commodore, and rear-admiral, in all of which grades he sustained the character of an intelligent and efficient officer. During a period when active service in the Navy was not available, in order to perfect himself in the duties of seamanship, he entered the merchant service, and made several voyages to Europe and the East Indies.

During the War of 1812 he was ordered to Lake Champlain, and served as a lieutenant under McDonough. In the battle of Plattsburg he was second in command of the brig *Eagle*, which carried twenty guns. In that bloody fight he received a wound, the effects of which he will carry with him to his grave. One incident of that battle which Admiral Smith relates is worth recording. Among those on board the *Eagle* was one who had his wife with him. This man was killed during the action, and his body laid down on the berth-deck. Several of the powder-boys were soon killed or wounded, and this woman volunteered to take the place of one of them, and carried cartridges from the magazine to the guns, stepping each time over the mangled corpse of her husband. The name of that woman should be known.

For his gallantry on that occasion Lieutenant Smith received a medal from the Government. He was in the frigate *Constitution* in the war with Algiers, then in the *Guerriere*, as first lieutenant under McDonough, and subsequently commanded that ship in the Pacific. He at one time commanded the line-of-battle ship *Ohio* in the Mediterranean, and afterward the Mediterranean squadron in the flag-ship *Cumberland*.

In 1846 he was appointed chief of the Bureau of Yards and Docks, and the fact that he has retained that place up to this time (1867), is sufficient evidence of the ability with which his department of the service has been conducted. It was his son who so gallantly defended the Congress when attacked by the *Merrimack*, and who was killed in that action.

His connection with the board appointed to examine and report upon the proposed construction of iron-clad vessels, and the support which he gave to Ericsson's inven-

Notwithstanding the manifest hazards of an untried experiment, involving so large an amount as the construction of a Monitor, men were found who had the sagacity to perceive the excellences of the plan of Ericsson, and who had the courage and patriotism to take all the risks which the enterprise required. The names of such men should be handed down in history equally with those who fought our battles, or those who distinguished themselves as statesmen and legislators.

The genius that conceived the Monitor, and the patriotic manufacturers who perilled reputation and money in her construction, were as truly among the heroes and saviors of the country as the President and his Cabinet, or our legislators, or the generals at the head of our armies, or our naval officers on their victorious ships.

Such men were those who associated themselves for the purpose of building and bringing out the Monitor. These men were, the Hon. John A. Griswold, of Troy, N. Y.; C. S. Bushnell, of New Haven, who first brought Ericsson's drawing to the notice of the Secretary of the Navy, and who, being also the contractor for the building of the Galena, was willing to take the additional risk of the Monitor. With these two was associated John F. Winslow.

Conspicuous among these as the man whose capital, general influence, and business resources were relied upon to carry out the enterprise was John A. Griswold, whose extensive iron mills and acquaintance with manufacturers enabled him to push forward the work, so that the Monitor was not too late in reaching the scene of her trial and her triumph. As Mr. Griswold

tion have already been mentioned. The New Ironsides, however, was Admiral Smith's favorite ship; and he was in favor of constructing other casemated broadside vessels. At his suggestion the original dimensions and form of the New Ironsides were somewhat changed, so as to lessen her draught to enable her to enter the Southern harbors. This ship was undoubtedly one of the finest broadside frigates in the world, and reflects great credit on the good judgment of Admiral Smith.

He made several suggestions to Mr. Webb in the construction of the Dunderberg, some of which were adopted.

He was entirely opposed to ignoring wood in the construction of iron vessels; and neither approved nor recommended the building of the iron vessels Dictator and Puritan. The man who was a friend of the Monitor and New Ironsides deserves to be remembered.



John Guiswold



occupies a prominent position before the country, as one of her leading and trusted public men, in addition to his connection with the Monitor, it may be well that the friends of the Navy should know something of his history.*

Such were the circumstances in which the Monitor took her place in the American Navy.

Eriesson was the undisputed inventor of the new battery. He had conceived the idea several years before the war. C. S.

* JOHN A. GRISWOLD was born at Nassau, Rensselaer County, New York. His ancestors were among those who fought in the war of the Revolution, and one of them was confined in the Jersey prison-ship, suffering as well as fighting for his country. He was educated for commercial pursuits; and when about seventeen years of age he entered the iron and hardware house of Hart, Seeley & Warren, in Troy, New York. About one year after, he accepted the position of book-keeper in the house of C. H. & I. J. Merrick, cotton manufacturers. With this firm he remained for some time, living in the family of his uncle, Major-General J. E. Wool. Soon after engaging in business for himself, he became interested in the iron manufacture, and that and banking have formed his principal occupations. He entered political life as a member of the Democratic party, and in 1855 was elected Mayor of the city of Troy. His Democracy, however, never led him into opposition to the Government, and upon the breaking out of the rebellion he at once placed himself firmly on the side of the country. He presided at a public meeting in Troy, on the 15th of April, and urged a speedy response to the demands of the Government. The Second regiment of New York volunteers was largely aided by him in preparing for the field. His assistance was also liberally given to several other regiments, one of which was known as the Griswold Light Cavalry.

Soon after, in connection with C. S. Bushnell, of New Haven, and John F. Winslow, the contract for building the Monitor was entered into, the model having been shown to Mr. Lincoln, who expressed much interest in the matter. The building of the Monitor was begun in October, 1861, the contractors advancing for the work \$275,000. On the 30th of January, 1862, one hundred days from her commencement, she was launched at Greenpoint. Thus Mr. Griswold and his associates were instrumental in saving the reputation of the Government at a very critical hour, and such men deserve to be gratefully remembered as public benefactors.

Subsequently Mr. Griswold employed his capital and influence in the construction of the Dictator; and when the Navy Department was attacked in the Senate by Mr. Hale, and in the House by Mr. Davis, he made a very effective speech in defence of its policy, and especially in the construction of the Monitors. As a politician Mr. Griswold has enjoyed in a high degree the confidence of the Union party. Elected for three successive terms to Congress, and in the very period when the country was passing through its severest trials, he proved himself true to the great principles on which the war was fought; and was, in consequence of his faithfulness and high-toned patriotism re-elected for the Fortieth Congress by the largest majority ever given for a candidate in his district. Not only by his construction of the Monitors, but by long service as an efficient member of the Committee on Naval Affairs, he identified himself with the interests of the Navy.

Bushnell, by permission of Ericsson, brought it to the notice of the Secretary of the Navy while at Hartford. Mr. Welles was pleased with it, and referred it to the board which had been appointed by Congress to investigate the subject of iron-clad vessels. It met, at first, with little support, except from Admiral Smith. Early in the discussion, the plan was approved by the Assistant Secretary, Captain Fox, who has since so fully identified himself with the Monitor fleet. The rapid construction of the Monitor, so that she was ready to meet the Merrimack, was mainly due to the capital, the energy, and patriotism of John A. Griswold, and his partners, Bushnell and Winslow.

The iron-clad navy was first discussed and designed in reference to the retaking the forts and harbors of the South; but the known progress which the rebels were making with their frigate at Norfolk made it necessary to devise the means of meeting that meditated attack; and it may therefore be said that the first Monitor was extemporized for the purpose of stopping the Merrimack; and all criticism and all censure are completely answered by the one fact that she did completely the very work for which she was mainly designed.

It has been said she was not a sea-boat, yet she encountered rough weather on her passage to Hampton Roads, and went through safely. It was said she was so slow, yet she was there in time to save the Minnesota and the country's honor. But she had that awkward overhang: yes, but in spite of that, she repulsed the rebel frigate and saved the Navy and our cities. Yet the men were all shut up below water: yes, and they all came out alive after a four hours' fight with the most formidable vessel then afloat, except her small antagonist.

The following is a brief description of the original Monitor :

Extreme length on deck over the armor	173 feet.	
Extreme beam on deck over the armor.....	41 "	6 inches.
Depth.....	12 "	
Length of iron hull	127 "	
Width of iron hull.....	36 "	2 inches.
Projection of armor-shelf forward.....	14 "	
Projection of armor-shelf aft.....	82 "	

The thickness of the side armor was five inches above the

water-line, diminishing, first to four inches, and then to three inches, below the water. The whole armor above the water was two feet three inches of wood, and five inches of iron. The turret was made of eight thicknesses of one-inch iron plates. Its inside diameter was twenty feet, and its height nine feet. Her armament was two 11-inch guns laid side by side, and they revolved with the turret.

Such was the diminutive affair which repulsed and drove back to harbor a first-class iron-clad broadside frigate. Her success was manifestly due to her peculiar structure, the invulnerable turret which shielded her guns and her crew, the great weight of her shot, and the extremely small surface (little more than her turret) which was exposed to the enemy's fire. She was slow; but the Monitors lately constructed are fast. She had many defects, inseparable from the hasty carrying out a new idea. But, notwithstanding her faults, she settled the value of the principle of her construction; and the Government at once determined to build nine more according to the general plan, with such changes as experience had suggested. The nine vessels of this new Monitor fleet were modelled alike, and their dimensions were as follows:

Length on deck.....	200 feet.
Width on deck.....	45 "
Depth.....	12 "
Length of hull proper.....	159 "
Width of hull proper.....	37 " 8 inches.
Overhang of armor-shelf forward.....	16 "
Overhang of armor-shelf aft.....	25 "
Tonnage.....	844 tons.
Draught of water.....	10 feet.

It will be seen by these dimensions that there was, even so early, a tendency to diminish the overhang in proportion to the size of the vessel, and this idea has been acted upon in vessels lately constructed. The side armor of these vessels is five one-inch plates; the wood backing three feet three inches; and the deck is plated with two thicknesses of half-inch iron. The turret is eleven inches thick, made of eleven one-inch plates. It is nine feet high, and the inside diameter is twenty feet. The armament was originally intended to be two 15-inch guns; but this varies, some carrying one 15-inch and one 11-inch gun,

and others one 15-inch smooth-bore and one Parrott rifle, a 150-pounder or a 200-pounder. These are the ships that were engaged at Charleston.

The so-called light-draught Monitors need not be particularly described, as they were failures. They were intended for operations against Fort Fisher, and for service on the Southern rivers; but from an error in calculation, instead of floating at the proper height, they were, when launched, so low in the water as to be unserviceable without a change in plan. Great complaints were made against the Department on account of these vessels. The mistake was one which could not be foreseen; and the only fault was, that somebody did not make it certain that the calculations were in proper hands, and also under proper supervision. The error has nothing whatever to do with the principle of Monitor construction.

The next class of Monitors ordered consisted of vessels of one thousand tons' burden. They are about 225 feet long; the overhang is less, and sponsons extend from its outer edge to the hull, and this increases their speed and their safety as sea-boats. Their turrets are composed of eleven one-inch plates, and their side armor is so constructed as to be practically equal to eleven inches of solid iron, besides the wooden backing. These are more formidable vessels than any that preceded them, and it is easy to see that they are absolutely invulnerable to any artillery that has yet been mounted on board a ship, except in our own Navy; and that no broadside ship now afloat could maintain a close action with one of these with the slightest prospect of success, unless it were possible for the large ship to run the small one down, a thing which the Merrimack was by no means able to do in her battle in Hampton Roads.

The next effort of the Government was to construct some swift ocean cruisers on the Monitor plan, and the Puritan and the Dictator were begun. The Puritan is a double-turreted ship, while the Dictator has but one turret, and is some twenty feet shorter than the Puritan, and the armament of this latter ship is by far the more formidable one. In other respects they are so similar, that the following description of the Dictator will answer very well for both. It was published originally in the *New York Tribune*, and has been revised by Mr.

Ericsson himself. Some comments of the editor are also included, as forming a part of the history of the opinions of the day:

It having been frequently stated that the Dictator is an ocean iron-clad, the impression prevails that she resembles the New Ironsides and other vessels built for the purpose of going to sea. This is not so. The Dictator has none of the paraphernalia of such ocean-vessels as we are in the habit of looking at in our harbors. She has none of the tall bulwarks, no masts, no rigging, no capstan on deck—nothing, in fact, that looks like an ordinary ship. A long-armed man could dip his hands into the water from her deck.

The dimensions of the hull of the vessel are as follows: Extreme length over all, 314 feet. The aft overhang being thirty-one feet, and forward overhang thirteen, it leaves 270 feet between perpendiculars—extreme breadth fifty, and depth twenty-two and a half feet. Like the original Monitor, and the Monitors that are now in course of construction, the Dictator is almost exclusively iron—her frames, keelsons, and plating being of that metal. A person looking at her in the river can form no idea of her appearance when she is completely out of the water. If an ordinary ship were lifted up, and an immense shelf of eleven inches of iron placed on the top of her deck, overhanging for a space of some four feet on each side, she would resemble the Dictator. Taking into account the curvature of the sea, the Dictator could not be seen four miles off.

The armor of the original Monitor consisted of five inches of iron, laid on in single plates, each one inch thick. That of the Warrior consisted of four and a half inches of iron, laid on in a solid slab like our own iron-clad frigate Roanoke. The French frigate La Gloire had also four and a half inches of iron laid on in a solid slab. Now, the Dictator has on her sides eleven inches of iron, and five inches of this is in solid beams, somewhat like the Warrior, the La Gloire, and the Roanoke, except that the plates of the latter were in very large slabs, while those of the Dictator are in beams five by eight inches. Over these 5-inch blocks of iron are six 1-inch plates of iron; making altogether an armor of eleven inches of iron, the same dimensions as the armor of a turret of the Passaic, Montauk, etc. The armor begins at the deck and goes down six feet, which takes it about four feet below the water; so that the deck of the ocean iron-clad Dictator will only be about two feet over water. Below this armor there are sixteen feet of the ship, composed of plating 13-16ths of an inch thick. The weight of

the armor is about five hundred tons—the burden of a pretty large-sized steamer. There will be but one turret, of an improved pattern. It was originally intended to cover it with twenty-four inches of iron, but the perfection to which its construction has now been brought will render fifteen inches sufficient. This is four inches more than the armor of the Passaic class of turret, and ten inches more than the armored sides of those vessels. The apparatus for working the guns will be more perfect than any yet carried out. The revolution in naval artillery, caused by the facility with which four or five men can work the 15-inch gun, will be made still more startling when one or two men can handle such immense pieces of ordnance. The gear of the turret is different from that of the other vessels only in point of size. The turret complete will weigh almost five hundred tons, or thereabouts, being almost as heavy as the entire armor of the vessel.

The ram is perhaps the finest piece of work aboard the ship. The ram proper is twenty-two feet of solid oak and iron; unlike the Keokuk, which protruded from the bottom of the hull near the keel, this extends from the top of the deck, being, as it were, an extension of the entire armor of the ship. Another advantage in this ram is, that it could be carried away without any material damage or injury to the vessel, and without her making water.

The decks are perfectly clear of all incumbrances except the turret. The same objection made to the other Monitors, relative to their liability to be injured by plunging shot from forts, is valid in the Dictator's case; but it is only just to say, that, of the iron-clad vessels engaged in the attack on Charleston, none has suffered any serious inconvenience from injuries done to the deck. It seems almost impossible, and has proved so, that a projectile fired from a ship could enter the deck. The armor of the deck consists of one and a half inches of iron, laid on in two plates, in the same manner as in the other vessels.

The berth-deck—that on which the crew and officers are to live—is a very commodious one, the head-room being equal to that of any first-class sailing frigate in the Navy. A man six feet high, with his hat on, can walk, without stooping, from end to end of it.

The ship is ventilated by three immense blowers; two for the use of the vessel generally, and one for the express purpose of ventilating the engine-room. These blowers are of immense size, about seventy-two inches by forty-eight inches. An air-trunk, supplying a blower eight feet in diameter, is placed thirty-five feet from the stern. The air to supply the other blowers is drawn from the top of the turret and distributed through the ship.

The machinery of the Dictator is of greater power than that of any man-of-war built in this country or in Europe. The cylinders are one hundred inches in diameter. Cylinders of these dimensions have never been built in this city, except for side-wheel steamboats. The cylinders are bolted to massive wrought-iron keelsons, ten feet deep, and some twenty-four inches in width. They are both in line, athwart ships, and have large slide and expansive valves, the latter working over the former. A peculiar feature of the machinery is the absence of guides, cross-heads, and other cumbrous parts. The piston, four feet stroke, has a trunk attached to it. The boilers are immense, six in number, and have fifty-six furnaces, and an aggregate grate-surface of 1,100 feet; allowing twelve pounds of coal per square foot of grate-surface, the vessel will require at least one hundred and forty tons of coal per day of twenty-four hours' steaming at full speed, which will never be requisite excepting when chasing an enemy. The weight of these boilers will be almost seventy tons each, that is, four hundred and twenty tons altogether, without water; so that when they are completed they will weigh over seven hundred tons. The propeller shaft is a gigantic piece of forge-work; it weighs something like thirty-six tons, the burden of an average sloop. The propeller is a right-handed true-screw, twenty-one and a half feet in diameter; has thirty-four feet pitch, and weighs 39,000 pounds. There is no outboard bearing for the shaft. What piston-speed will be obtained from the engines remains to be seen. The propeller cannot be injured by any projectile, as a shot would have to pass through twenty-six feet of water to strike it. The engines are calculated to be something in the neighborhood of 5,000 horse-power.

One of the greatest difficulties in the way of making the iron-clads permanently useful was that of protecting the bottoms from the filth which concentrated there and prevented them from moving. The original Monitor had to be towed from Fortress Monroe to Washington, on account of her bottom being so foul. The English frigate Warrior also experienced a similar inconvenience. All sorts of paints have been tried, and all with want of success. The most popular was a sort of English "peacock" paint, which was used in some of the mail-steamers; but it did very little good. On the bottom of the Dictator, however, and on all of our iron-clads to be built henceforward, and most of the naval-built vessels, a successful remedy has been devised, which will keep the bottoms perfectly clear of all filth. It is called "ship-zinc" paint, and is perfectly white in color. Some thirty years since a vessel was coated with it in England; she arrived here a few weeks ago, and her bottom was found in perfect order. The Government has responsible parties

furnishing the paint, and its purity can be relied on. It is confidently expected that a vessel so complete, with eleven inches of armor and such a heavy battery, will prove herself the Dictator of the ocean.

Captain Tyler, of the Royal Engineers, in a lecture before the United Service Institution, January 18th, delighted his hearers by assuring them that "the turrets of the Monitors and their port-stoppers were effective principally in preventing the guns from being worked." He further stated that the report of Secretary Welles "confirmed the worst estimate that we (the English) had formed of them." The unprejudiced lecturer further told his hearers that the only Federal vessel that had ventured within 700 yards of Fort Sumter, the Keokuk, had to be withdrawn in a sinking condition, and afterward sunk. "The 11-inch guns proved too much for the 11-inch turrets of the Monitors," added the lecturer, leaving his hearers to infer that the Keokuk was a Monitor whose turret and hull had been riddled by Confederate balls. Our readers will bear in mind that this statement was made on the 18th of January, 1864, on an occasion of more than ordinary gravity, the subject under consideration being the great national question of harbor defence and the fortifications at Spithead. Captain Tyler produced charts showing that there were three distinct channels, varying from 1,000 to 3,000 yards in width, open to an enemy's vessels, and which channels he said could not be obstructed; yet, as the Keokuk had been sunk at a distance of 700 yards, these channels could not be entered by our iron-clads.

We will not attempt to dispel Captain Tyler's delusion, nor question the soundness of his argument in proof of England's security. Our object is simply to point out that he has grossly misrepresented our naval achievements. The fact is, the Royal Engineers have been forced to admit the impregnability of our turrets and port-stoppers—hence their annoyance. The brevity of the action with the Confederate iron-clad Atlanta has shown that the "cheese-box on a raft" is something more than a mere Yankee notion. The English artillerists are surprised to find that while they require twenty men to handle a 10-inch gun on land, our enormous pieces of 15-inch calibre are handled on board of the Monitors with half a dozen hands—a single man only being required to point these guns. But more surprising still, the turrets and the port-stoppers offer absolute protection to guns and gunners.

The lecturer of the 18th of January knew that the Monitors had been repeatedly engaged with the Confederate batteries at short ranges, since the first conflict at Charleston, and he well knew, at the time when he addressed his audience, that upward of 2,000 shot had hit the

Monitor fleet. The *Pátapsco*, it was well known at the time, had been in twenty-eight engagements, yet nothing had been destroyed within her turret, and not the slightest derangement caused to her machinery. These stubborn facts Captain Tyler cannot grapple with, and therefore tells his hearers what happened during the first brief trial of the new system, under fire at Charleston, in April, 1863. A port-stopper which had been placed too near the turret in one of the vessels, stuck. The application of hammer and chisel for half an hour removed the difficulty. Not a single accident of the kind occurred during the whole siege, not a pound of Confederate metal entered through plates or port-stoppers; and yet an officer in her Majesty's service, before an audience composed of distinguished persons, ventures to state that "the turrets of the Monitors, and their port-stoppers, were effective principally in preventing the guns from being worked," and that the Confederate guns "proved too much for the 11-inch plates which composed the turrets of the Monitors."

We forbear comment, but advise the English people not to be lulled into security by assurances based on professional conceit and ignorance. Their neighbors over the Channel have fully proved that iron-clads, of the European type, are unfit to fight at sea, and that notwithstanding M. Xavier Raymond's splendid account of their success, written to order for the *Revue des Deux Mondes*, just published, something better must be contrived. Accordingly, the Emperor of the French, through his agents, is taking a very careful look into our turrets. England will do well to do the same; for with a single opponent at Cherbourg, such as our large turret vessels, with their 15-inch thick iron protection to their enormous guns, and 10½-inch side armor, backed by four feet of oak, the *Warriors*, *Black Princes*, and *Prince Consorts* could not hold the Channel for a single day. The experiments at the Washington Navy-Yard established the fact long ago, that the 4½ inch plating of the European iron-clads with its thin wood backing, affords no protection against the enormous weight of ordnance which is part of the Monitor system. The result of the recent trials of armor-plate instituted by the Navy Department, which we alluded to a few days ago, will amaze our Transatlantic rivals. The news of the fate of the famous 6-inch solid armor-plates, considered by the French as impregnable, will be most unwelcome. The utter demolition of Messrs. Petin and Gaudit's 6-inch plate at the first shot from a 15-inch gun at Washington Navy-Yard, on the 10th of February, 1864, will form an epoch in the history of iron-clads. The small-bore and high-velocity theory has received its quietus by this last practical mode adopted by the Navy Department

for settling the question. Much credit is due to the Assistant Secretary of the Navy for his persistent course in adhering to the large smooth-bore principle, the successful application of which now enables us to defy all European iron-clads.

It would appear that the great problem is nearer to solution than has been supposed. We have guns that can tear to fragments 6-inch solid armor-plates at a single shot, and therefore fully adequate to crush in the sides of any European iron-clad. We operate these guns within impregnable iron cylinders 15-inches thick, which at the will of the gunner turn to any point of the compass. These cylinders again we place on vessels, which, while they present a very small target to the enemy's fire, are protected by 10-inch side armor, backed by timber from three to four feet in thickness. In regard to speed, those who are best informed expect that our large turret-ships will be very fast. We abstain from all speculation on this point, since the Dictator will be under steam by the end of April. It will be proper to add, that our rivals have frequently asserted that our small Monitor vessels would be useless for defensive purposes, notwithstanding their heavy and well-protected guns. They have boasted of their superior speed, and told us that their Warriors would run down the small Monitors, pass our forts, and come up to our wharves.

It has just occurred to them that their armored ships draw twenty-five feet water, while the Monitors only draw ten and a half feet; and that the gunner in a Monitor turret, safe on the shoals along the main channels, can unmolested and at short range put his 15-inch shot through the insufficient armor of the intruder.

In the Dunderberg the Government has undertaken to combine some of the advantages of a turreted ship with a broadside vessel. A description of this novel ship, as she was before launching, is copied from the *Scientific American* for March 14, 1863:

The formidable ram-frigate Dunderberg, now building for the Government by W. H. Webb, at his yard at the foot of Sixth Street, in this city, is in a very forward state, and being completed as fast as possible. We lately visited this vessel, and are able to furnish a few details of her construction, which we think will prove acceptable to our readers.

The hull of the Dunderberg is massive, being solid from stem to stern. It is 378 feet long, 68 feet wide, and 32 feet deep. The frames are twelve inches thick, and are built of oak, firmly bolted and fastened together.

The model of the ship is very peculiar. The floor is dead flat for the whole length, and the sides rise from it at an angle everywhere save forward, where they are very nearly vertical. The bow is as sharp and has as fine lines as it is possible to give it; and the stern and run aft are very clean and handsomely modelled. The hull is divided by several water-tight compartments, both longitudinally and transversely—a precaution common to nearly all modern sea-going ships, which has been found indispensable. The frames are strapped diagonally with heavy irons, five inches wide by seven-eighths of an inch thick, blunt bolted to them. There is a slight sheer on deck, but it is almost invisible to the casual observer at a short distance. There is but one rudder: provision is made, however, for steering by an auxiliary apparatus of a peculiar nature, should the main steering-gear be shot away. The frame-timbers, twelve inches thick, are ceiled inside five inches thick, planked outside five inches thick, and over the planking two courses of heavy oak beams, twelve inches thick, are again laid, making in all an aggregate amount of nearly five feet of solid timber on the ram's sides. The planking is all caulked, and the seams payed, before the last protection is applied, and the entire mass is as firmly bolted together as it is possible to do it.

The ram on the Dunderberg is about as formidable a looking object as one can conceive. The entire forefoot of the vessel is prolonged thirty feet from the hull proper, and, rising easily upward from the keel about half the distance from the water-line, is there rounded, presenting a blunt end in shape like the profile of an axe-edge; it then runs back toward the stem again. The mass of wood which forms this ram projects inside the hull almost as far as it does outboard, and is there substantially secured to the main timbers. The sides and edge of the ram will be iron-plated; and even should the whole of it be knocked off in an affray, the builders say that the hull will be water-tight.

The Dunderberg has, on top of the main-deck, casemated quarters for the guns and crew. This casemate slopes at an acute angle from the sides to the top. It takes up a large portion of the vessel amidships, and is an elongated octagon in shape. It is made of heavy timber, plated with iron four and a half inches thick. It is pierced on each side for three broadside guns, and has one port forward and another aft, in the casemate, for bow and stern firing. The hull of the ship is built out from a distance below the water-line to meet the edge of the casemate above, so that the broadside of the Dunderberg will present an acute angle to the line of the enemy's fire. We do not know what the inclination of the casemate and side is, but it cannot be less than 45°.

The mass of wood and iron presenting a resistance to the enemy's rams or projectiles at this point amounts in all to seven feet. There are to be two turrets on the top of this casemate. The thickness of the turret-walls will be much greater than those of the Monitor batteries, and strong enough to resist the heaviest ordnance.

The armament of the Dunderberg has been variously guessed at by parties. As it is not publicly known what it will be, we are not able to inform our readers, further than that rumor assigns the 20-inch guns to the broadside, while each turret will also contain two heavy guns. The deck of the casemate, and also the main-deck, will be plated bomb-proof; and the quarters for the officers and crew, being in the fortress on deck, will be thoroughly ventilated and open to the light and air: there will then be none of that depressing influence which is so marked in the departments assigned to the crews on the other batteries.

One great and overwhelming advantage that this splendid vessel has, is that she is built of wood. She may leak, become water-logged, roll, pitch, and toss, but there will still be some hope for the crew as long as they stick to her. Iron batteries fill and plunge out of sight with very little warning. The effect of this fact upon sailors morally is not the least important one. Although no men could have behaved better than the crew of the Monitor did in their peril, yet they all felt that their case was hopeless; and if they were saved, it would be more the result of good fortune than any aid which their ship could afford them. The Dunderberg will draw about twenty feet of water. Her speed is not stated. Her engines are estimated at 6,000 horse-power. We are not able at present to give particulars of them.

The next class of Monitors planned by the Department is represented by the Monadnock and Miantonomoh. The intention was to produce a double-turreted ocean cruiser. These ships are of the usual Monitor type in general, but without the side projection or overhang of the armor, by which omission it was expected that the speed of the vessel would be increased. In this there has been no disappointment.

These Monitors have a speed of eleven knots, and therefore rank among the fastest war-ships afloat. Doubtless there are some swifter ships than these in the French and English Navies, and we have faster wooden vessels; but it must be remembered, that ships that are reported to make fourteen or sixteen knots on their trial trip, and in smooth water, fall very much below

this at sea; and an iron-clad making eleven knots at sea, as these Monitors have done, deserves the name of fast.

They are two hundred and fifty-seven (257) feet long, with two turrets of the usual size. The side armor is equal to eleven inches of solid iron, besides the wood backing, and the turrets are twelve inches thick. The armament is four 15-inch guns, and consequently the weight of a broadside of solid shot is eighteen hundred (1,800) pounds.

These Monitors, as has been said, float about two feet out of the water, and the size of the target which they present to an enemy's fire has been shown already. No one can visit one of these wonderful vessels without feeling that art and skill have overcome every serious objection which has been made against the Monitor form. The writer has visited the Miantonomoh in weather when ventilation was needed; and found the air fresh and pure throughout the ship, though lying at anchor; and again in the cold, damp days of winter, and then there was no sense of dampness or chill in any part of the vessel. The perfection of the machinery, the beautiful adaptation of new machinery to meet the new wants of such a novel war-ship, are worthy of all admiration. A sense of almost perfect security against shot, and the consciousness of wielding a power that nothing yet invented can resist, produce that frame of mind in which men can do their utmost. Such a sense of security, and confidence in weapons, is an almost certain guaranty of success in a combat where in other respects the parties are equal.

In addition to these, the Department had nearly completed, at the close of the rebellion, a still more formidable class of Monitors. Excepting, perhaps, only the Puritan, they surpass in defensive and offensive power any vessels which have yet been constructed, whether here or in Europe.

The dimensions of this class, of which the Kalamazoo is a representative, are as follows:

Length.....	342 feet.
Breadth.....	56 " 8 inches.
Depth on the side.....	21 " 6 "
Outside iron plating.....	6 inches.
Thickness of iron stringers.....	8 " }
Whole thickness of wooden backing.....	14 inches of iron.
Whole thickness of side, wood and iron.....	80 inches.
	8 feet 8 "

THICKNESS OF DECK.

Wood deck-plank	6 inches.
Iron plating	3 "
Wood on top of plating	3 "
* Whole thickness	12 inches.

Below this twelve inches of wood and iron are the heavy transverse beams which support the deck, and between these timbers large iron braces, so that practically, the deck, as before stated in regard to the Miantonomoh, is solid to the water-line, or nearly so, and therefore the whole width of the deck is the actual backing of the side armor. The turrets of these Monitors are fifteen inches thick, and are constructed upon a new principle, which it is supposed will greatly increase their power of resistance. The outer circle of the turret is composed of five one-inch plates. The inner circle is also formed of five one-inch plates, while the space between these, of five inches, is filled in with solid iron rings or bands, five inches thick, of solid iron. These vessels are thirty-two hundred tons' burden.

Nothing, perhaps, will show more impressively the firm convictions upon which the Department has acted in the construction of the Monitors, than the statement made by one high in office, who has a reputation at stake, and who knows, as well as any man can, the merits of this national question. He said he was quite willing to have the American Navy subjected to the following test: He would anchor one of these new Monitors, and around her, at a distance of fifteen hundred yards, should be anchored as many of the broadside iron-clads of France and England as they might choose to place there, more or less, with their present armament, and each of these ships should be permitted to fire one broadside at the Monitor; then, if at the close of this the Monitor should be disabled, or unable to return fire, America should be considered beaten. But if not, then the Monitor should fire her guns, once at each ship; and the contest for superiority in ships and guns should be decided by the result.

It is very easy to throw ridicule upon such a proposition as vain and empty boasting; but the result of such a trial is as easy to be calculated beforehand as the effect of known physical laws. What effect would any ordnance yet mounted on

shipboard by France and England have on fourteen inches of solid iron in side armor, or fifteen inches in the turret at a distance of fifteen hundred yards? How often would the best gunners strike the narrow strip of hull above the water? and how often the centre of the turret? for a shot aside from the centre would glance aside. And should the shot strike, what harm would be done? None whatever, or, at most, a damage not essential. But the Monitor can return that fire with 15-inch smooth bores, or with 12-inch rifles; and it requires no long thought to determine the effect of such projectiles upon any broadside iron-clads which are yet afloat. Nothing could more completely show the superiority of the American Navy than such an experiment as this.

This superiority may or may not be temporary. No man will pretend to set bounds to the inventive genius of the nations. England, France, all Europe indeed, are intent upon new discoveries in the art of slaughter and defence; and no man can foresee what new forms the science of war may next assume. Something as far removed from our present thought as was a Monitor from the thought of the past, may be produced here or elsewhere. All that is now claimed is, that when the war closed the American Navy was the most formidable one in the world, and that for the future we may safely rely upon the genius and skill of our countrymen, if the Government will only give them suitable means wherewith to work. It will be all in vain that we have inventive power or skilful mechanics, if we have no suitable navy-yards, or docks, or machinery with which ships can be built or repaired, while our enemies are abundantly provided with all that anxious thought can suggest or the wealth of nations supply.

As a proper addition to the arguments and statements already made, the following opinions of eminent men in regard to the Monitors and iron-clads in general are presented here:

**EXTRACT FROM A LETTER OF THE SECRETARY OF THE NAVY TO B. F. WADE,
CHAIRMAN OF THE COMMITTEE ON THE CONDUCT OF THE WAR.**

The necessity of light-draught iron-clads to operate in the bays, sounds, and rivers, as well as for defensive purposes, was forced upon the Department at an early period of the present struggle. Not only was

the contest in which we were engaged peculiar, but the means and measures to meet and suppress it, particularly those of the Navy, were novel and without precedent. Most of the lines of army communication were by water, and the Navy was expected to protect them and render them secure. A brief experience and a few engagements made it evident that light-draught, unprotected, wooden boats, with magazines, machinery, and boilers exposed, could be driven off by field artillery behind earthworks. Light-draught iron-clads became, therefore, an imperious necessity, and the convictions of the Department, and of all indeed who gave the subject intelligent consideration, were irresistibly in favor of such vessels; but we were without models, and the wants of the country were pressing. Neither of the maritime powers of Europe had built, or attempted to build, a light-draught iron-clad.

The Navy Department, in this emergency, was compelled to feel its way, without experience or precedent in any quarter to guide it. Appeals had been made in vain to Congress to provide a proper establishment for the construction of iron and armored vessels, where plans and models might have been developed and matured with studied deliberation and skill. When the contracts for these vessels were entered into, delays were inadmissible. Difficulties with foreign powers seemed imminent, and in the absence of any national establishment immediate contracts for the construction of armored vessels were called for on every hand. The authorities of the States and cities on the seaboard were appealing to the Department and the Government for iron-clad vessels to defend their harbors from the two or three rovers that were then already abroad, and great apprehensions were entertained that certain formidable ships in the process of construction in France and England for the rebels would soon visit our coast. Many who may now be forward to criticise and censure the enlarged and energetic action that was taken, were at that time profuse in censuring the Department for delays in not more promptly providing whatever vessels were necessary for the service.

Congress having omitted to provide an establishment for the construction of an iron navy, where this class of armored vessels of light draught could be constructed, the Department has been compelled to rely on contractors and outside parties in different sections of the country for the work.

The parties contracting have generally exerted themselves to meet in good faith the requirements of the Government, and it is a subject of just congratulation that, in this great emergency, when the Department was compelled to act without precedents to guide it, and when the Government had omitted to furnish a suitable establishment, private

enterprise and our skilled mechanics have so well met the difficulties presented.

Mr. J. B. Eades, of St. Louis, furnished the light-draught river-boats which have been so successful on the Mississippi and also in the bay of Mobile. Captain Ericsson, the inventor of the Monitor class of vessels, furnished the idea which is now near practical consummation. Although as yet untried, these vessels differ so little from the original Monitor, that there is every reason to anticipate their success. To predict otherwise would be presumption; yet it has been the misfortune of the Department to encounter hostility and forebodings of failure with every improvement which has been made during the war, and often from those of whom encouragement and support might reasonably have been expected. Some of the best engineers and constructors in the service of the Government, as well as others, expressed their want of confidence in the first Monitor, and declared it would prove a failure. It was represented that she could not float, that she would plunge to the bottom when launched, and that to send her to Hampton Roads would be recklessness amounting to crime. A constant succession of struggles against prejudices, ignorance, and fixed habits and opinions, has been the fate of the Department at every step which the extraordinary exigencies of this war have compelled it to take. While it is not difficult to criticise and point out mistakes in a new description of vessels which the change in naval warfare has suddenly called into existence, and to suggest alterations and improvements on what has already transpired, it is a satisfaction to the Department which was compelled to encounter this opposition to know that this class of vessels, subjected at the beginning to ridicule, and subsequently to obloquy and denunciation, has been successfully tried in battle and in storm—that these vessels have equalled the expectations of the country in periods of peril, and have been extensively copied abroad. Other Governments are adopting them, while many of the discontented of our own country still question the wisdom of building vessels of the class which has at a critical moment rendered unequalled service to the Union, and saved the capital of the nation.

In encouraging contrast with the illiberal and prejudiced opinions which have opposed all improvements, denounced them in advance as failures, and been dissatisfied even with successful results, are the observations and reflections of the sagacious and sensible author of the recent valuable work on "English and French Neutrality," who, appreciating the difficulties of the Department, remarks, at page 458 of his instructive volume:

"It is no small proof of ability in the management of the Navy, that

there was skill enough to provide, and independence enough to use, a form of war-ship and a kind of cannon before untried, but which time and experience have shown were alone of all ships and weapons then known capable of meeting the emergency."

At the present time the call for light-draught iron-clads comes from every squadron engaged in this struggle. Acting Rear-Admiral Lee says that within the limits of his command there must be a large increase of light-draught iron-clads. Vice-Admiral Farragut, before he left the scene of his great exploits, asked for additional iron-clads, especially those of light draught, and declared that the coast could not be held unless he had them. In each of the blockading and river squadrons they are required.

Nearly two years have elapsed since any contracts have been entered into for this class of vessels, and it is hoped the present war is so near its close that no further expenditures for additional ones will be necessary; but should the war continue a year longer, more will be wanted.

My acknowledgments are due to the committee for this opportunity to express my views. I shall feel under obligations to them or others, as will the whole country, for any improvements or suggestions which they may propose in consequence of their investigations, or for any undetected errors or mistakes which they may discover, in order that their conclusions and recommendations in this great emergency may be brought to the aid of the Department on this most interesting and important subject.

REPORT OF REAR-ADMIRAL J. A. DAHLGREN.

FLAG-STEAMER PHILADELPHIA, }
OFF MORRIS ISLAND, *January 28, 1864.* }

SIR: Conformably to the wishes of the Department, I submit the following review of the services of the Monitors while under my command; and as some knowledge of the circumstances under which they have been tested may afford a better appreciation of their qualities, I shall briefly narrate some of the leading events in which they have participated during the operations at this place.

On the 6th July Rear-Admiral Du Pont delivered to me the command of the naval forces occupying the coast of South Carolina, Georgia, and part of Florida; they embraced seventy (70) vessels of all classes, and were distributed at various points along an extent of more than three hundred miles. There was no concentration, the purpose being rather to distribute the vessels in order to enforce an efficient blockade.

Of the iron-clads, the Ironsides was off Charleston bar, two Monitors were at Edisto, one at Stono, three at Port Royal, and one at Ossabaw.

The orders of the Department (June 24, 1863) only directed me to assume the command; they went no further, nor was there need that they should. There was an enemy in front, and it was my duty to, compel him to obedience, so far as my means permitted. On the day that I arrived, an interview occurred with General Gillmore, in which the details for a descent on Morris Island were arranged to commence on the Wednesday following, but which were postponed first to Thursday and then to Friday, in order to allow General Gillmore to perfect his arrangements.

In the absence of specific instructions, I was obliged to assume the responsibility of action which the Department was advised of.

The naval part of the operations consisted of—

1. In assembling the iron-clads at the Charleston bar, so as to cross at early daylight on the day named, to cover the attack of the troops, to prevent the arrival of reinforcements during that attack, and to engage the rebel batteries, particularly Fort Wagner.

2. To furnish a convoy for the column that was to ascend to Stono, cover its landing, and shell James's Island.

3. To guard the depots of the army at Hilton Head and at Seabrook during the withdrawal of the troops concentrated on Folly Island.

I should here state that Mr. Ericsson had decided to increase the thicknesses of the pilot-houses of all the Monitors, and add heavy circles of metal to the bases of the turrets and pilot-houses.

The three at Port Royal were already in hand for this purpose, and some progress had been made. A part of my preparation consisted in putting a stop to the work, and having the vessels fitted temporarily for service.

This was effected in season, and before daylight of the 9th of July the Monitors were off the bar, ready to pass in at the first sign of movement by the United States batteries on Folly Island.

The plan was to open from the masked batteries on the north end of Folly Island, cross the bar with the Monitors, and enfilade the rebel position on the eminences of Morris Island, while the troops were to cross the narrow inlet which divides Morris Island from Folly Island when the proper moment arrived. The obscurity of the night still rested on land and sea when I went on board the Catskill (July 10), and not a symptom of preparation on shore was visible to us.

It was important that the Monitors should not by their appearance give any intimation of what was meditated by being seen on the bar

until the details ashore were completed ; so I waited the first fire of the batteries. This was not long coming, and I led with my flag in the Catskill, followed by Captains Fairfax, Downes, and Colhoun, in the Montauk, Nahant, and Weehawken. Steering for the wreck of the Keokuk, and passing it, the Monitors were laid in line about parallel to the land, opposite the southern eminences of Morris Island, and poured in a steady fire among the rebel garrison, who were there posted, making a feeble and ineffectual return to the storm of shot and shell that came upon their front and flank. I could see plainly the great confusion into which they were thrown by this sudden and overwhelming onslaught. It was a complete surprise, both as to time and to power developed.

The Monitors were run in as close as the shoal waters permitted, so that the shells from our own batteries on Folly Island passed close ahead of and at times over some of them.

About 8 o'clock a body of men were seen coming over the low sand-beach of Morris Island, and while hesitating whether to treat them to some volleys of grape, the sight of the Union flag* told who they were. They composed the brigade which had been brought from the Folly River by the boats of the squadron under Lieutenant-Commander Bunce, and Lieutenant Mackenzie.

I paused for a moment to observe the gradual accumulation of our men in masses, and their advancing movement ; then pushed forward to accelerate with our enfilading fire the retreat of the rebels.

The sight was now of great interest. Our own troops could be seen taking possession of the sand-hills where the enemy had rested the sole defence of this end of the island, while some battalions were moving along the beach. The defeated rebels were hurriedly making their way along the low, flat land north of their position, and some two or three detached dwellings were in flames, while the Monitors skirting the shore maintained a steady fire on the retreat. Presently they reached Fort Wagner, and here we were advised that our advance was checked, at least for the day, though it was but nine o'clock. The discomfited rebels were safe in the work, and our own men halted at a reasonable distance from it.

The Monitor with my flag was now anchored as near the beach as the depth of water permitted (twelve hundred yards), and the other Monitors in line to the southward. A steady fire was begun about 9.30—the fort replying briskly—and maintained through the day, except

* The first planted on Morris Island by Lieutenant Robeson.

the dinner hour, until six in the evening; then I retired and anchored lower down.

Next morning before six o'clock the flag-lieutenant reported to me that an assault had been made at daybreak by our troops and failed, and about nine o'clock I had a note in pencil from the general, saying: "We attempted to carry Fort Wagner by assault this morning and reached the parapet, but the men recoiled and fell back with slight loss."

It is known *now* that reinforcements had been hurried to the island by the rebels, and had entered the work about midnight.

I had no notice whatever of the general's intent, and could, therefore, render no aid in time.

Here ended the first part of the enterprise against Morris Island. It had been in all respects a surprise, and so complete that the rebels do not seem to have had any idea of it until the day before; and it is not certain they were then aware of the scale on which it was to be conducted.

Had a work like Wagner crowned the sand-hills of the south end, we could not have established our position on the island—even a surprise would probably have been out of the question. But there were to be no more surprises—the undertaking was to be completed only by hard work patiently endured in the trenches, and by batteries ashore and afloat.

The general now decided to make a second assault in force, and to cover it by some light batteries established at distances varying from one thousand to seventeen hundred yards.

While the preparations for this design were going on, the Monitors were daily at work to occupy the attention of Wagner and keep down its fire—the gunboats assisting at long range.

On the 18th July, all being ready, about noon I led up in the *Montauk*, followed by four Monitors and the *Ironsides*, anchored at twelve hundred yards, as near as the state of the tide would permit, and opened fire—the gunboats firing at a greater distance, and the shore batteries also in action.

As the tide rose the *Montauk* gradually closed in, until at seven o'clock she was about three hundred yards from Wagner, when I ordered grape to be used. Unable to endure the fire of the vessels, the guns of the fort were now silent, and not a man was to be seen.

About sunset a note in pencil from General Gillmore announced his intention to assault, but it was quite dark before the column reached the work. The fire of the vessels was continued so long as it was safe for our own men ashore, but ceased when the darkness made it impossible to distinguish friend and foe. The rattle of musketry soon made known the commencement of the assault, and continued with little in-

termination until 9.30, when it ceased, and then came the painful tidings of our defeat.

This was the end of the second part of the operation, and proved that the work was too strong and too pertinaciously defended to be taken by any off-hand blow. The slow and laborious operation by trench and cannon only were capable of reducing it.

And here I may remark, that in this necessity is to be found a principal cause for the delay in reaching Charleston that subsequently ensued. It was no doubt unavoidable, for it is to be presumed that no more troops could *then* be spared from the main armies. If there had been sufficient to make such an assault as would have overpowered all opposition, Wagner might have been carried at the first assault, Gregg would have yielded immediately, Sumter would soon have followed as a matter of course, and the iron-clads, untouched by severe and continued battering, would have been in condition to come quickly in contact with the then imperfect interior defences.

The rebel movements clearly indicate that they admitted the impracticability of defending Morris Island, and consequently Sumter, after our position on it was fully established and covered by the iron-clads. They only sought to hold the island long enough to replace Sumter by an interior position; hence, every day of defence by Wagner was vital to that of Charleston.

This policy was successful for two months (10th July to 7th September), and gave time to convert Fort Johnson from a forlorn old fort into a powerful earthwork—improved by the experiences of Wagner. Moultrie received similar advantages, and most of the cannon of Sumter were divided between Johnson and Moultrie. Batteries were established along the south shore of the channel from Johnson toward the city; and thus an interior defence was completed which, though it separated more widely the salient and principal works of the defence, by substituting Johnson for Sumter, yet rendered access to the upper harbor far more difficult, because a more powerful fire was concentrated from additional batteries upon vessels attempting to enter.

And thus it was that, even after Morris Island was evacuated and Sumter dismantled, the fleet must still pass the fire of Moultrie and Bee to find itself in presence of a formidable earthwork, supported by continuous batteries, and commanding obstructions more difficult than any between Sumter and Moultrie.

The real nature of these obstructions was not suspected until the winter freshets had broken away and floated into our hands a fair specimen of them, which were certainly far more formidable than had

been anticipated. So well do the rebels keep their counsel, that the best-informed refugees, who had been constantly engaged about the harbor, appeared to know as little about them as we did.

During the progress of the engineers toward Wagner the iron-clads played an important part, using their guns whenever an opportunity offered, as shown in the instances quoted on page 213. It may be readily conceived that, all things being equal, it was just as easy for the rebels to have worked toward our position as it was for our troops to work toward theirs. But there was a serious difference in the fact that the cannon of the iron-clads, and also of the gunboats, completely enfiladed the entire width of the narrow island, and absolutely interdicted any operation of the kind on the part of the rebels. In addition, whenever their fire was bearing severely on our own workmen, a request from the general always drew the fire of the vessels; and I do not know that it failed to be effective in any instance. As a consequence, the rebels were restricted to Wagner, and were powerless to hinder the progress of the trenches that were at last carried into the very ditch of the work, and decided its evacuation without assault.

The day before the contemplated assault, I led in the iron-clads in force, as agreed on, and battered the fort all day, tearing it into a sand-heap. The next morning it was to have been stormed, but the enemy had fled: they foresaw the inevitable result.

The vessels thus shared fully with the army in the operation that led to the abandonment of the works on Morris Island, and besides what is already mentioned, prevented the access of reinforcements or their accumulation between Wagner and Gregg. The boats of the squadron were also engaged on picket duty by night along the seashore of Morris Island, and the little stream on its inner border.

A detachment of seamen and marines, under Captain Parker, participated in the practice of the batteries on Fort Sumter, by working four navy rifle-cannon, landed for the purpose.

The duties of the iron-clads were not performed under idle batteries. The guns of Wagner never failed to open on them, and fired until their crews were driven, by those of our iron-clads, to take shelter in the bomb-proofs. One of these cannon, a 10-inch, left deep dents on every turret, that will not easily be effaced.

The operations of the iron-clads against Morris Island were appropriately closed by a severe contest with Fort Moultrie, Batteries Bee, Beauregard, etc., to relieve the Weehawken, which had grounded under their fire, and was finally got off with some severe injuries, owing to the falling tide having exposed the hull under the overhang.

There were other occasions when severe conflicts occurred with the rebel works on Sullivan's Island.

And besides the principal attacks in force, there were few days from the first attack on Morris Island (July 10th) to its evacuation (September 7th) that some iron-clads or gunboats were not engaged in firing at the enemy's works, so as to facilitate the labor of our troops ashore, as will be perceived by the following sample from the record :

DATE.	Object.	Vessels engaged.
1863.		
July 18	Assault on Wagner.....	Montauk (flag), Ironsides, Catskill, Nantucket, Weehawken, Patapsco; gunboats Paul Jones, Ottawa, Seneca, Chipewa, Wissahickon.
" 23	Wagner	Nantucket, Ottawa (gunboat).
" 24	Wagner, to cover advance.....	Weehawken (flag), Ironsides, Catskill, Montauk, Patapsco, Nantucket; gunboats Paul Jones, Seneca, Ottawa, Dai-Ching.
" 25	Wagner	Gunboats Ottawa, Dai-Ching, Paul Jones.
" 28	Wagner	Weehawken, Catskill, Ottawa (gunboat).
" 29	Wagner	Ironsides, Patapsco.
" 30	Wagner	Ironsides, Catskill, Patapsco, Ottawa (gunboat).
" 31	Rebel batteries on Morris Island.	Ottawa (gunboat).
Aug. 1	Wagner	Montauk, Patapsco, Catskill, Weehawken, Passaic, Nahant, Marblehead (gunboat).
" 2	Wagner	Ottawa, Marblehead (gunboats).
" 4	Wagner	Montauk, Marblehead (gunboat).
" 6	Wagner	Marblehead (gunboat).
" 8	Wagner	Ottawa, Marblehead, Mahaska (gunboats).
" 11	Wagner and vicinity.....	Patapsco, Catskill.
" 13	Rebel batteries on Morris Island.	Gunboats Dai-Ching, Ottawa, Mahaska, Wissahickon, Racer.
" 14	Rebel batteries on Morris Island.	Gunboats Wissahickon, Mahaska, Ottawa, Dai-Ching, Racer, Dan. Smith.
" 15	Wagner	Mortar-boats Racer, Dan. Smith.
" 17	Rebel batteries on Morris Island, to direct fire from our batteries which opened on Sumter.	Weehawken, Ironsides, Montauk, Nahant, Catskill, Passaic, Patapsco; gunboats Canandaigua, Mahaska, Ottawa, Cimaron, Wissahickon, Dai-Ching, Lodona.
" 18	Wagner, to prevent assault.....	Ironsides, Passaic, Weehawken; gunboats Wissahickon, Mahaska, Dai-Ching, Ottawa, Lodona.
" 19	Wagner	Ironsides.
" 20	Rebel batteries on Morris Island.	Ironsides; gunboats Mahaska, Ottawa, Dai-Ching, Lodona.
" 21	Sumter and Wagner.....	Ironsides, Patapsco; gunboats Mahaska, Dai-Ching.
" 22	Wagner	Weehawken, Ironsides; gunboat Montauk.
" 23	Sumter.....	Weehawken, Montauk, Passaic, Patapsco, Nahant.
Sept. 1	Sumter and obstructions.....	Weehawken, Montauk, Passaic, Patapsco, Nahant, Lehigh.
" 5	Between Sumter and Gregg.....	Lehigh, Nahant.
" 6	Wagner and Gregg.....	Ironsides, Weehawken, Montauk, Passaic, Patapsco, Nahant, Lehigh.
" 7	Batteries on Sullivan's Island...	Ironsides, Patapsco, Lehigh, Nahant, Montauk, Weehawken (ashore).
" 8	Batteries on Sullivan's Island...	Ironsides, Patapsco, Lehigh, Nahant, Montauk, Weehawken (ashore).

I shall now briefly comment on the various qualities of the Monitors:
1st. Capacity for resistance. 2d. Power of ordnance. 3d. Draught of water. 4th. Speed. 5th. Number of crew.

Endurance.—During the operations against Morris Island the nine iron-clads fired eight thousand projectiles, and received eight hundred and eighty-two (882) hits. Including the service at Sumter in April and the Ogeechee, the total number was eleven hundred and ninety-four (1,194) distributed as follows:

Service of iron-clads. South Atlantic Blockading Squadron. Shots fired and hits received by them during operations against Morris Island.

VESSELS.	NO. OF SHOTS FIRED.		Hits.	Hits April 7, 1863.	Hits at Ogeechee.	Total hits.
	15-in.	11-in.				
Catakill.....	138	425	86	20		106
Montauk.....	301	478	154	14	46	214
Lehigh.....	41	28	36			86
Passaic.....	119	107	90	35	9	134
Nahant.....	170	276	69	86		105
Patapsco.....	178	230	96	47	1	144
Weehawken.....	264	683	134	53		187
Nantucket.....	44	155	53	51		104
Ironsides.....		4,439	161			164
Total.....	1,255	6,771	882	256	56	1,194

	No. of shots fired.	Weight of projectiles fired, in tons.
By Ironsides.....	4,439	298½
11-inch, by Monitors.....	2,332	151½
15-inch, by Monitors.....	1,255	213½
Total.....	8,026	653½

Additional list of actions in which the new Ironsides was engaged with the rebel batteries in Charleston harbor while reducing Morris Island.

DATE.	Name.	Rounds fired.	Hits by enemy.	Distance.	Object.	Remarks.
1863.				Yards.		
July 19	New Ironsides.	805	4	1,400	Fort Wagner	
" 20	"	168	13	1,300	"	
Aug. 23	"	90	4		"	Ship was under way; distance varied from 1,100 to 1,300 yds.
Sept. 2	"	41	7	1,000	Fort Gregg.	Hits from Gregg and Moultrie; ship at anchor.
" 2	"	9		1,500	Fort Sumter	
" 5	"	488		1,300	Fort Wagner	
" 5	"	32	1	1,800	Fort Gregg.	Hit from Gregg.

On July 29th the Passaic engaged Wagner, and on August 31st .

Moultrie. On September 8th the Passaic (in a disabled condition), Patapsco, Weehawken, and Nahant engaged Moultrie.

Of the eight Monitors, one was always absent at Warsaw (Nahant or Nantucket), to blockade the rebel ram. The Lehigh did not arrive until August 30th, therefore was only able to participate in the operations of the remaining seven days, but did good work.

For some time only five Monitors were available for general attack, and then six, which was the greatest number disposable at any one time.

The consequences of the protracted firing and hard usage to which the Monitors were exposed during these two months of incessant service, were unavoidably very considerable in the aggregate; and the greater, also, that all repair which could possibly be dispensed with was postponed to the conclusion. It was therefore necessarily extensive when entered upon. The battering received was without precedent. The Montauk had been struck two hundred and fourteen (214) times; the Weehawken one hundred and eighty-seven (187) times, and almost entirely by 10-inch shot. What vessels have ever been subjected to such a test? It is not surprising that they should need considerable repair after sustaining such severe pounding for so long a time, but only that they could be restored at all to serviceable condition. The force of the 10-inch shot must be experienced to be appreciated. Any one in contact with the part of the turret struck falls senseless, and I have been nearly shaken off my feet in the pilot-house when engaging Moultrie.

All the little defects of detail were marked by such a searching process. Decks were cut through; cannon were worn out; side armor shaken; tops of pilot-houses crushed, etc. But all these were reparable, and no vital principle was seriously touched.

With such workshops and means as a Northern navy-yard includes, the repair of all Monitors would have been speedily executed; but when machinery, tools, labor, and material have all to be obtained, as they were here, from a great distance, there was of necessity considerable delay; and, moreover, it was not admissible to withdraw but a portion of the Monitors at a time from the blockade.

The additions that were deemed advisable for strengthening the pilot-houses and turrets were also put on at this time, and the bottoms cleaned, for they had now become so foul with oysters and grass that the speed was reduced to three or three and a half knots, and, with the strong tide of this harbor, added considerably to the difficulties of working the vessels properly under fire.

On one night I was caught by heavy weather from the southeast while close up to Sumter, when I had gone to attack it; and it was well

that the darkness of the night prevented the slowness of our motion from being perceived while extricating the Monitors from their position.

Power of Ordnance.—Each turret contains two guns, and from the peculiar facility which it has for giving direction to the heaviest ordnance, no doubt, arises the desire to make these of the heaviest description. How far other considerations should control the character of the ordnance is necessarily an unsettled question.

To strike an armored ship, it may be best to use a gun capable of the greatest power; but whether this shall be derived from a projectile of great weight, driven by low velocity, or of less weight, and high velocity; whether it shall be a 15-inch gun, fired with thirty-five or forty pounds, or a 13-inch, fired with fifty pounds of powder, is not here material: the weight of the gun for either purpose will not vary to any important degree. But in operations against earthworks, whose material cannot be damaged permanently, but only disturbed, and which are only to be dealt with by keeping down their fire, a much lighter projectile would be preferable, in order that the practice may be as rapid as possible. Hence a piece of sixteen thousand pounds for 10-inch or 11-inch shot and shell.

When a number of Monitors are brought together it would be better also to have guns of like kind in each turret, and bring into action whichever might be preferable. Each of the Monitors of this squadron had a 15-inch and a smaller gun (11-inch or 8-inch rifle), and hence the rapidity of fire, which was most desirable, was not attained. That this was due to the calibre of the gun, and not to its being located in a turret, may be shown by one notable instance.

November 9, 1863, the Montauk, Captain Davis, was engaged in battering Sumter. In so doing, the 11-inch gun fired twenty-five shells successively in one hour, of which twenty-one hit the wall of the fort aimed at—distance sixteen hundred yards. This is at the rate of one shell in 2.4 minutes, which is not only rapid but also exceedingly accurate practice. There is no reason why another 11-inch, if placed in the adjoining carriage (instead of the 15-inch), could not have been fired in the same time, at which rate that Monitor would have delivered an 11-inch shell every 1.2 minute. The rates of fire reported for the Ironsides, by Captain Rowan, are—

	Time.	No. fired.	Time for each fire.
	<i>A. M.</i>		<i>M.</i>
Most rapid	0 50	25	1.74
Continuous	2 55	490	2.86
Assumed	1 00	360	1.83
Montauk	1 00	25	2.40

It will be perceived, that for a short space of time the frigate delivered a shell from each gun in 1.74 minute, for three hours in 2.86 minutes, and it is believed that a fire could be sustained at the rate of 1.33 minute. The last rate is therefore possible, but I am sure it would be difficult to sustain it long with much regard to good aim and considerable distances; and I believe, on the whole, that for every practicable purpose there would be all desirable rapidity of fire from the 11-inch in turret. Thus it is not to be presumed that there will be equality of ordnance power in the same number of 11-inch guns as to rapidity of fire, whether in a turret or broadside.

Draught of Water.—The Monitors of the Passaic class draw about eleven and a half ($11\frac{1}{2}$) feet of water when properly trimmed. On this coast ten and eleven feet is the most convenient draught of water for penetrating all the principal sounds and rivers and navigating them to any extent. A greater draught restricts a vessel in movement, and in many instances excludes her from several ports, except under very favorable circumstances.

Speed.—The speed of the Monitors is not great (seven knots), but it is quite respectable with a clean bottom, and is fully equal to that of the Ironsides. Their steerage is peculiar, but when understood and rightfully managed, not difficult to control. They pivot with celerity and in less space than almost any other class of vessel.

Number of Men.—The number of men required to work them and the guns is only eighty, which is very moderate.

In common with all iron-clads, the scope of vision is much restricted, for the plain reason that in such vessels apertures of any size must be avoided. There are some other defects, but they are not inherent, and it is believed are susceptible of being remedied wholly or in part. So much for the Monitors.

The Ironsides is a fine, powerful ship. Her armor has stood heavy battering very well, and her broadside of seven 11-inch guns and one 8-inch rifle has always told with signal effect when opened on the enemy. Draught of water about $15\frac{1}{2}$ to 16 feet. Speed six to seven knots, and crew about four hundred and forty men.

The defects of the vessel are the unplated ends, which are consequently easily damaged by a raking fire, and involve the rudder and screw more or less, while she can return no fire in either direction. This was particularly and frequently inconvenient in attacking the works on Morris Island, for at certain stages of the tide vessels tail nearly across the channel, and present bow and stern to the beach of Morris Island, so that sometimes it was necessary to delay placing the vessel in

position, and at others she would swing around very awkwardly when engaged.

The Monitors, on the other hand, were almost equally well defended on all sides, and could fire in any direction. The Ironsides was also open to descending shot, and her scope of fire too much restricted by badly-placed ports.

The desire for comparison which rages just now can easily be satisfied by bringing the above data into juxtaposition.

Just as they are, the Ironsides is capable of a more rapid and concentrated fire, which, under the circumstances, made her guns more effective than the 15-inch of the Monitors. On the other hand, she was restricted by draught to the mid-channel, was very vulnerable to a raking fire, and the direction of her own guns was very limited laterally.

The Monitors could operate in most of the channels—could direct their fire around the whole circle—and were almost equally well defended on all sides.

The defects in both classes of vessels are susceptible of being remedied partially or entirely. The defence of the Ironsides could be made complete, and that of the Monitors equally so. The armament of the Monitors could be perfected so as to give all desirable rapidity of fire, but by no contrivance could the Ironsides be enabled to use much heavier guns than those mounted. Yet when such changes were made as experience has suggested, there still would remain to the Monitors the lighter draught, choice of guns from the heaviest to the lightest, defensibility, and direction of fire around the whole circle; consequently the ability to carry a heavy battery into the least depth of water, with equal power of offence and defence in any direction, and that with half the number of guns carried in broadside by another vessel.

The comparison now made is to be understood as having relation to existing circumstances, and not at all intended as conclusive in regard to the general merits of iron-clads.

It is in this sense that the action of the Navy Department is to be considered with reference to the selection of one class of vessels over another.

It is evident that it was not designed to adopt any one style exclusively, for of the three vessels first ordered two were of the ordinary broadside class—the Ironsides and the Galena. The latter was quickly proved to be absolutely inefficient, and so must any armored steamer of that size. It is universally admitted that plates of less than four and a half ($4\frac{1}{2}$) inches cannot stand the shock of heavy projectiles, and vessels so armored must be of considerable tonnage.

I presume the Department only intended to build such vessels as were best adapted to the service at the scene of war.

Keeping in view the peculiar exigencies of the case, which required light draught and great ordnance power, it appears that the selection of the Department could not have been more judicious in preferring a number of Monitors to operate from a heavy frigate as a base; and if the intent of the Department could have been carried out in regard to numbers, we should now have been in entire possession of the coast from the capes of Virginia to New Orleans, including Wilmington, Charleston, Mobile, etc.

Many defects of both classes are easily remediable, but some of those in the Monitors could only be determined by the test of battle; before that, approximation only was possible.

What other style of vessel could the Department have chosen? Certainly none that has been built by English or French naval authorities. The Warrior and her class are exceedingly powerful, but could not get within gunshot here.*

On the other hand, there is very little navigable water on this coast which is not accessible to the Monitors. They command supremely all that is near the shore, and cannot themselves be reached by vessels of heavier draught. So that, when there was some reason to apprehend the appearance of certain rams in this quarter, I assured the Department that the iron-clads could maintain position so long as coal and provisions lasted.

It may appear that I speak too positively on the subject, but some experience with them certainly gives a right to do so. With a single exception, I have been on board a Monitor in all the principal actions, and the recurrence of casualties to the fleet-captains† near me shows that I was in a situation to judge. I was once in the Ironsides in an attack on Moultrie and Sumter. I have also watched the behavior of the Monitors at anchor through all the phases of winter weather in this exposed situation.

The completeness with which four little Monitors, supported by an iron-clad frigate, have closed this port, is well worth noting.

* According to Rear-Admiral Paris, the French Gloire draws 28 feet; the British Warrior 26 feet; the Black Prince 23½ feet; even those of inferior class, Defence and Resistance, draw 24 feet. Not one of these vessels could cross the Charleston bar, and would be perfectly impotent to render the least service in any of the operations now being carried on.

† Captain George W. Rodgers was next ahead when killed off Wagner, and his successor, Captain Badger, had his leg broken by an iron splinter in the attack on Sumter.

Very soon after entering the roads I advanced one Monitor well up toward the inner debouches of the northern channels, supported by another. On the night of the 19th of July an English steamer attempted to run in, and having eluded the hot pursuit of the outside blockade, no doubt indulged in the belief that all danger was past. But the gallant Captain Rodgers was in advance that night with the Cat-skill, and a shell sent suddenly by him ahead of the culprit steamer signified no escape. In despair or alarm the latter grounded on a shoal, and her wreck has since served as a warning to like evil-doers. Two or three steamers that were in, managed to get out immediately after, and one or two may have gotten in, for the crews of the Monitors were often too fatigued then with a day's battle to keep watch at night; but there ended the business as such, and for several months not a vessel has passed in or out.

These four Monitors, who thus keep watch and ward, muster eight (8) guns and three hundred and twenty (320) men, which is almost insignificant in contrast with the work done.

I have thus put on paper the general impressions now uppermost, but very hastily and under great pressure of business, which will, I hope, excuse such imperfections as may have inadvertently occurred. With more leisure I could do full justice to this interesting subject.

I have the honor to be, very respectfully, your obedient servant,

JOHN A. DAHLGREN,

Rear-Admiral, Commanding S. A. B. Squadron.

Hon. GIDEON WELLES, Secretary of the Navy, Washington, D. C.

REAR-ADMIRAL PORTER'S VIEWS UPON IRON-CLADS.

FLAG-SHIP BLACK HAWK, MISSISSIPPI SQUADRON, }
CAIRO, February 16, 1864. }

SIR: I have the honor to report that I have made a visit to Cincinnati to examine the iron-clads there, and see what prospect there was of getting some of these vessels into immediate service.

It is much to be regretted that the boats at Cincinnati are not finished, as I am certain they would accomplish all that can be done by Monitors. No complaint, however, can be justly made against the contractors for want of activity in the performance of the work on these boats.

When I visited Cincinnati a little over a year ago, no preparations were then made to commence these vessels. Now they are in a fair way of being completed, and I think can all be put in the water and ready to operate against an enemy by the first of June.

When the Government do get these boats, they may rest assured of

receiving as good Monitor-built vessels as have yet been contracted for; for though I have not seen many to which I can compare them, I am glad to say that in workmanship, model, and probably in speed, these vessels will be equal, if not superior, to any Monitors yet built, at least of those that I have seen. I can only draw comparison between these and the first Ericsson Monitor, which I was sent by order of the Department to examine. I remember pronouncing that vessel "a perfect success," "and capable of defeating any thing that then floated." I was looked upon at that time as something of an enthusiast, as my opinions were widely at variance with those of some scientific gentlemen. The results have justified me in forming a high estimate of the Monitor principle, and I was pleased to see that on our Western waters we can build them as well, if not better, than in the workshops of the North. No better proof is wanted of the ability of the West to supply all demands of the Government for iron-clad vessels than is given in those building at Cincinnati. The work is perfect in every respect, and put together so well that it may be compared to joiner's work. The hulls are as strong as can possibly be desired, the speed will be good, and the only fault in the vessels, if they have any, is the "overhang" aft, which is of no consequence in a smooth sea, but must be injurious when the Monitors have to go from port to port.

The nearest to completion of these Monitors is one of those in the Greenwood building; she can be launched in a month, and I am of opinion, when finished, could commence at Cairo, and, going down the river, could destroy every vessel we have on these waters, unless they took advantage of their greater speed and run away. The heaviest and best vessel we have, the Benton, would stand a poor chance against the Monitor alluded to. If she failed to sink the Benton with shot, she could surely do it with her beak or ram, which is not the least formidable thing about her; this is saying a great deal, for the Benton is a very formidable vessel, and since she has been under my command has been struck 130 times in the hull, without any apparent damage. Three of the Monitors at Cincinnati are on the improved Ericsson plan, while the two light-draughts building at the Hamilton Works are to be submerged when going into action. I do not like that as well as the Ericsson model, as there is more machinery about them than is desirable; simplicity of arrangement being the object to be aimed at in vessels-of-war. The plan of these latter-mentioned vessels is a good one, provided their armor and backing is strong enough to stand heavy shot, which I think will be the case if they only encounter the ordinary rifle projectile.

From the information received from the different officers I have sent on duty at various times to the points where these iron vessels are building, the same favorable report is made of their efficiency, and the good work that is being put on them ; and in six months we will have a fleet of vessels that will keep this river against the fleets of the world, and be enabled to carry the war into the enemy's quarters, where there is any thing like an equality in guns. I think too much has been expected of Monitors heretofore, and the fact that two or three of them were not able to overcome obstacles formidable enough to keep out a large fleet of three-deckers has, in a measure, weakened the confidence of the public (who generally know little or nothing about such matters) in them.

But the Monitors, for harbor defence, are just as valuable as they were on the day when the first one drove the leviathan "Merrimack" back to her hole, and saved the honor of the nation. I am sure that Monitors would have done much better on this river than the old Pook gunboats did, which were built for temporary purposes only, or until Monitors could take their places. Earthworks on elevated positions are difficult to silence, it is true, except by a concentrated fire of many guns, and Monitors are not well provided in numbers. No vessels have been more successful than the Mississippi gunboats, whenever they have been called on to attack such works. Still they were very deficient in one respect, as they were very vulnerable, suffered a good deal, and proved that in the end the Monitor principle, from its invulnerability, was the only thing that could be safely depended on. For this reason I often wished that I had been provided with *one* good Monitor, with which, at certain times, I could have accomplished more than with a fleet of such boats as we have here.

A new boat, the Ozark, has just arrived here. As far as her turret is concerned she is all right, but her hull is too high out of water, and she lacks more than three inches of iron on fifteen inches of oak. I have, moreover, noticed that where there is a backing of wood covered with 3-inch iron, and *that* iron with wood again, the resistance of the latter will prevent balls of heavy size from entering the iron. In fact, it is hardly indented. This was particularly demonstrated in the passage of the fleet past Vicksburg, when it was necessary to take every precaution to insure success and prevent injury to the steamers. Heavy logs, twenty inches in diameter, were hung perpendicularly on the sides of the vessel, close together, and so secured that no shot could strike the side without passing through the logs. Bales of hay were also packed over the decks and sterns in sufficient thickness (it was supposed) to prevent the passage of any shot. Suffice it to say, the pressed hay was

no protection whatever against shot or shell. They passed through four or five bales, and very much endangered the vessels by setting the hay on fire. Wherever the projectiles of the enemy struck the logs, they did no further damage; they would pass through the logs, strike the iron without leaving more than an indentation, and glance off. Many instances of narrow escapes could be mentioned, where the vessels were saved by the intervention of the wood, and in no instance were the vessels damaged where the logs were properly placed. The incidents of that night—the passing of the Vicksburg batteries—suggested to me the idea of first having a heavy backing of wood, then a layer of iron, and then a covering of wood over the iron, which will, I am convinced, make a vessel perfectly shot-proof. I notice that the idea is not an original one, but has been discovered and recommended by several persons. There are two vessels in this squadron, the Lafayette and Choctaw, which give proof of the value of heavy backing to iron. These vessels were built with heavy frames, covered on the outside with gutta-percha, and then with a light thickness of iron. Whenever these vessels have been struck on the iron where the wood backing was heavy, they resisted the shot of heaviest calibre; but where the backing was light, shot went in at one side and out at the other. The defence of gutta-percha was not of the slightest use; on the contrary, it was a detriment and aided very much in destroying the vessels by rot. It is so much extra weight that the vessels have to carry, without deriving the slightest benefit from it. The money that built the Lafayette and Choctaw would have built three Monitors of such a model; that one Monitor would have destroyed both of the first. I would here state that these two vessels will only be serviceable for a short time, as they are already showing signs of weakness. They are not very serviceable, have not speed enough, and are too unwieldy for rams, and in some parts are very vulnerable. They have, however, fine machinery, and when they wear out it can be fitted to better hulls. I consider these vessels only as temporary expedients, to give way to the Monitor class, when there is a sufficient number built.

Another class of vessels in this squadron deserves mention, as showing the different expedients resorted to to open and defend the Mississippi River. I allude to the Tuscomb, Chillicothe, and Indianola. Two of these have been tried under batteries, and the Indianola in battle against vessels, and have shown that the Monitor principle only was the right one. Their turrets were in no instance found impenetrable to the heavy rifled shot, and besides they were soon damaged in their wheels, which afforded fine targets for the enemy to fire at. Still,

two of these vessels remained under fire as long as any Monitors have been known to remain at one time, and if they did not come up to the Monitors in invulnerability, they accomplished all that was required at the time, viz., the capture of the enemy's stronghold. The builders never claimed that they should be considered more than *temporary* expedients with which to harass the enemy; and, taken in that sense, they certainly may be considered very good vessels, and have fairly repaid all the money spent on them, taking into consideration the work they have done.

As to approving of any of the above-mentioned styles of gunboat, as part of a permanent system of national defence to be adopted in this country, that I cannot do. Any professional man who will lay aside his prejudices caused by the discomforts incident to the Monitors, must admit that, as a harbor defence, they are the best and only vessels to be built; and I hope we shall see every harbor in the United States, where there is a chance of an enemy penetrating, supplied with two or three of these floating batteries. If they have not been able to penetrate the harbor of Charleston, where fifty guns to one was opposed to them, and where they had to contend with obstructions placed in their way impossible to be removed, it in no way detracts from their well-earned reputation for efficiency. They have done at Charleston what no other vessels ever built *could possibly have accomplished*; and though the Army, as usual when combined operations are carried on, has monopolized all the honors, it is a very certain fact that the Monitors held their own as no other vessels could have done, and under their shelter the Army was enabled to perform its work successfully.

I hope, sir, you will excuse the unreasonable length of this communication on the subject of the Monitors; but I know their value when properly used, have felt the want of them so much at times, that I would have exchanged several even of the best of my vessels for one of them, properly fitted. I have seen a whole army kept at bay for the want of one of these little "shot-proofs," and have, now and then, been tempted to do foolish things, in hopes of accomplishing what I deemed impracticable. The Cincinnati was sunk when my own judgment told me it was wrong to place her where I was called upon to order her. With a single Monitor results would have been very different; and on that day, instead of having a vessel sunk, the right wing of our army would have gained a position commanding the most important works in and about Vicksburg. Vulnerable as this vessel was, it would not have done for the Navy to hesitate, when the Army thought there was a prospect of success.

In conclusion, sir, permit me to express the hope that the West may be converted into a large workshop for the building of future Monitors of all sizes. I know of no part of the Union where the work can be done better or quicker.

I have the honor to be, sir, very respectfully, your obedient servant,

DAVID D. PORTER, *Rear-Admiral.*

Hon. GIDEON WELLES, *Secretary of the Navy, Washington, D. C.*

EXTRACTS FROM MR. J. SCOTT RUSSELL'S WORK ON NAVAL
ARCHITECTURE.

Mr. Russell says of "the modern American fleet:" It is a creation altogether original, peculiarly American, and admirably adapted to the special purpose which gave it birth. Like most American inventions, use has been allowed to dictate terms of construction; and purpose, not prejudice, has been allowed to rule invention.

The ruling conditions of construction for the inventors of the American fleet were these: the vessels must be perfectly shot-proof—they must fight in shallow water—they must be able to endure a heavy sea, and pass through it, if not fight in it.

The American iron-clad Navy is a child of these conditions. Minimum draft of water means minimum extent of surface, protected by armor; perfect protection means thickness to resist the heaviest shot, and protection for the whole length of the ship; it also means perfect protection to guns and gunners. Had they added what our legislators exact, that the ports shall lie in the ship's side, nine feet above the water, the problem might at once have become impossible and absurd; but they wanted the work done as it could be done, and allowed the conditions of success to rule the methods of construction.

The conditions of success in the given circumstances were these: that you should not require the sides of the ship to rise much above the water's edge; that you should not require more protection to the guns than would contain guns and gunners; that you should be content with as many guns as the ship could carry, and no more.

To do the work, therefore, the full thickness of armor required to keep out the enemy's shot was taken, but the ship was made to rise a few inches above water, and no more; and so a narrow strip of thick armor, all along the upper edge of the ship's side, gave her complete protection. Thus the least quantity of thickest armor did most work in protecting the ship, engines, boilers, and magazine. Next, to protect the guns, a small circular fortress, shield, or tower, encircled a couple of

guns; and if four guns were to be carried, two such turrets carried the armament and contained the gunners. Thus, again, weight of armor was spared to the utmost, and so both ship and armament were completely protected.

But the consequences of these conditions are such as we, at least for sea-going ships, would reluctantly accept. The low ship's side will, in a sea-way, allow the sea to sweep over the ship, and the waves, not the sailors, will have possession of the deck. The American accepts the conditions, removes the sailors from the deck, allows the sea to have its way, and drives his vessel through, not over the sea, to her fighting destination by steam, abandoning sails. The American also cheerfully accepts the small round turret as protection for guns and men; and pivots them on a central turn-table in the middle of his ship, raising his port high enough to be out of the water, and then fighting his gun through an aperture little larger than its muzzle.

By thus frankly accepting the conditions he could not control, the American did his work and built his fleet. It is beyond doubt that the American Monitor class, with two turrets in each ship, and two guns in each turret, is a kind of vessel that can be made fast, shot-proof, and sea-proof. It may be uncomfortable, but it can be made secure. The sea may possess its deck, but in the air, above the sea, the American raises a platform on the level of the top of his turrets, which he calls his hurricane deck, whence he can look down with indifference at the waves fruitlessly foaming and breaking themselves on the abandoned deck below. His vessel, too, has the advantage, as he thinks it, of not rolling with the waves; so that he can take his aim steadily and throw his shot surely. Thus, if he abandons much that we value, he secures what he values more.

I think I have reason to know that the American turret-ships, of the larger class, with two turrets and four guns, are successful vessels—successful beyond the measure of our English estimate of their success. Like so many American inventions, they are severely subject to the conditions of use, and successful by the rigidity and precision with which they fit the end and fulfil the purpose which was their aim.

Plate 138 contains longitudinal section, deck plans, and cross section of the original American Monitor of Captain Ericsson—the first turret-ship that distinguished herself in action, having to engage with her single turret and pair of guns a large broadside ship of much heavier tonnage and armament, which she thoroughly defeated.

Captain Ericsson, the builder of the Monitor, has long been distinguished equally in England and America. He was known as the builder

and designer of one of the most remarkable engines, in the original competition, preliminary to the opening of the Liverpool and Manchester Railroad; he was afterward distinguished in the introduction of the screw propeller in steam navigation, and he has crowned his career by the successful construction of the class of turret-ships, which appear to have been taken up with avidity and prosecuted with energy by the American Government; and during the course of their sad civil war, the Monitors appear to have rendered to the Federal side very important services. The design of these vessels has about it all the characteristics of American audacity. Every conventionality of the ship has been despised and discarded; in the sailor's sense of the word there is nothing "ship-shape" about this original Monitor; every thing is unusual. She has neither keel, nor bilges, nor bulwarks. She is very nearly a London bridge, covered by a great horizontal platform of timber, projecting beyond her deck, and descending below the water-line. This great upper platform in no way conforms to the shape of the under-ship which carries it; it is obviously meant to shelter the rudder and the stern from every attempt to damage them by collision. At the bow the entire hull is equally protected by the overhanging platform of the deck, and the whole upper works of the ship are covered with thick iron armor on both sides, and the wooden deck is protected by iron plates. The rudder is a balanced rudder, and the ship is propelled by a single screw; the boilers are the double-tier boilers, of the ordinary construction, with four sets of flues. It will be noticed that the arrangements of the turret are very different from Captain Coles's arrangements. The whole turret is on the upper deck, exposed to shot; it is not carried on a revolving set of rollers, but is pivoted on the centre, which seems to carry most of its weight by means of an iron trussing, from which it is, as it were, suspended, and it slides on a smooth metal plate lying on the deck. The turret is worked by a small pair of donkey-engines, working on tooth-gear, and the ports are covered by hanging blocks. Like our turret, the Monitor shield has two guns worked parallel to each other on slides. The manner in which these turrets were afterward improved and matured by experience, is shown in plate 139, and it is certain that Captain Ericsson rendered great service to his country by inventing at once, and successfully introducing, a class of vessels peculiarly suited to action in their inland waters and shallow navigations; and when we consider the extreme rapidity which attended the execution of the project, we must say that the original Monitor was a remarkable success, and that she was a type of an entirely new class of war-ship. It is curious and instructive to observe how differently the system has been

developed in America and in England: in the one case the sudden abandonment of all the conventionalities of a ship, and in the other the studious retention of old forms and ways, admitting the innovation with the greatest possible amount of reluctance and seeming aversion. But it is almost always so with the Americans, who love a thing because it is new, even without any other recommendation; and with the English, who begin by hating a novelty, whatever be its merits.

LETTER OF DONALD MACKAY.

CURTIS GUILD, *Esq.*, *Editor Commercial Bulletin, Boston, Mass.*:

DEAR SIR: According to my promise, I herewith furnish you with a few facts relating to the English and French iron-clad fleets, which I have recently inspected, and find many vessels completed which during previous visits were in process of construction, the names and particulars of which I gave you in former letters several years ago. I also saw several new iron-clads in progress, differing materially in construction and armor from the first. I am more convinced than ever that those iron-clad fleets fully meet my views as to efficiency and sea service, as stated in my previous communications to you.

While viewing these, their style of construction, equipment, etc., I felt proud that our Navy Department, since 1861, have constructed, built, and equipped an iron-clad fleet, both for home defence and sea-going service, more powerful than all the iron-clad navies of the world; and I strongly recommend to the Government, as a profitable and judicious expenditure, and one which will prove to be the strongest guaranty of peace and just neutrality, a continuance of building and adding to our iron-clad sea-going fleet, thus keeping pace with other nations.

I can allude with pride to that wonderful production of human genius, the *Dunderberg*, now in the process of construction by Mr. William H. Webb, of New York. I have personally inspected all the iron-clads of England and France, but I have not seen one of them which in originality of design, power, and completeness of detail, begins to compare with her. She combines the impregnability of the turret system with the advantages of the broadsides and ends. In short, she can bring guns to bear from every point of the compass without changing her position. From the appearance of her model it is evident to me that she must be an excellent sea-boat, of superior speed, and, notwithstanding her great size, easily managed. It is said she will cost over \$2,000,000; but this is not high when compared with the sums lavished upon the large iron-clads of the Old World, which are far inferior to her as a ves-

sel-of-war. I consider her a match for a fleet of such vessels as some of the best produced in France.

I am pleased to find that the Honorable Secretary, in his report, has recommended the enlargement of our navy-yards, work-shops, dry-docks, etc.; also a building-yard of proper size for the construction and fitting complete of the largest iron-clad ships; for the machinery and furnaces, for forging and rolling plates equal in size and thickness to those used by the English Navy. In this way we would get the finest qualities of iron, so essential for armored ships. A plate of the best quality of laminated iron, four inches thick, will protect a ship's side, and resist solid shot equal to the common manufactured plates of six inches in thickness. This test was made in England. Large quantities of iron for both hull and armor, made by different contractors, which did not come up to the standard quality, I have seen condemned in England. I believe that the means and facilities for the manufacturing of iron plates and armor should be owned by and under the control of the Government.

Over forty large wooden screw-ships without armor are under construction now in the Government yards, and many are well advanced toward completion. The hulls were designed by Mr. John Lenthall, chief of the bureau of construction and repairs, on the Alabama principle for speed, and the motive power by Mr. B. F. Isherwood, chief of bureau of steam engineering. Having inspected those ships and their machinery, I have no hesitation in saying they will be the fastest war-ships in the world. The class carrying the two 100-inch cylinders will attain a regular sea-going speed of upward of fifteen knots.

With all that we have done and are doing in the increasing of our Navy, I see, with our Honorable Secretary, one fearful deficiency in basins or dry-docks. Supposing that we had a hard naval engagement, resulting in the damaging of many vessels, we have only dry-docks enough to repair a few ships, and for this reason we would at once become comparatively weak at sea; and this is a matter which should receive our early attention. Both France and England, while adding to the strength and number of their ships, keep pace with the increase of their dry-docks and basins. Unless we adopt this system, the additions to our Navy so liberally appropriated for by Congress will avail but little. The French dry-docks contain space sufficient for fifty of the largest class ships at one time, and England is fast approaching this also.

On Mr. E. J. Reed's accession to the chief constructorship of the British Navy, the Board of Admiralty authorized him to alter some of the small classes of wooden ships (partially built, still on the stocks)

for armor plating, on a plan proposed by himself for new vessels of 2,000 tons. The conversion of these into iron-clads by the new constructor was rather a difficult task, and should not be expected to equal new designs, yet they proved to be very successful sea-going ships. The *Enterprise* was the first taken in hand. She carries her armament and armor at somewhat less than the contemplated draught (sixteen feet), and steaming only one-fourth of a knot less than other vessels of her class carrying no armor at all. Her armor is four and a half inches thick, and extends over the whole length of the hull at the water-line, and over a battery of four heavy guns carried amidships. A year ago she was ordered on general service to the Mediterranean, and was the first British man-of-war that passed the Straits of Gibraltar with the new broadside six and a half ton naval guns, firing 100-pound round shot with twenty-five pounds of powder, having previously been pronounced by Admiral Sidney Dacres, the commander-in-chief of the Channel squadron, after many sea trials, the best iron-clad in the navy, as regarded sea-going qualities, accommodation, ventilation, etc.

The conversion of the *Research* followed the *Enterprise*, and differing from the latter chiefly in the fact that the upper deck was lowered in the former, and the armor continued up to it instead of the armor at the ends being a mere narrow belt. This would no doubt make the *Research* a stronger, more enduring ship in action, but it has made her a comparatively wet vessel in a sea-way, although many officers of our own Navy who have had experience in our Monitors, would perhaps consider her efficient when they learn that her upper deck is four and a half feet above the water at its lowest point; that the whole length of the deck is protected by bulwarks six feet high, and that in the central thirty-six feet of the ship's length she carries a fixed solid battery up to a height of eleven and a half feet, at which height it is decked over with sheet iron, covered with four-inch planking.

The *Favorite*, a ship of 2,000 tons, and the *Zealous*, of nearly 4,000, were next taken in hand and converted by plans of the chief constructor, both being wooden ships and answering well so far as they have yet been tried; although in the case of the *Zealous*, as in that of the French ships *Magenta* and *Solferino*, there is a large exposed portion of the wooden hull before and abaft the battery which would no doubt be speedily set on fire in action. Still, there is no comparison between the offensive and defensive powers of these vessels as at present constructed, and what they would have been if completed on their original designs as mere unprotected wooden hulls.

A great improvement over the first iron-clads was a plan of Rear-

Admiral R. S. Robinson, Comptroller of the British Navy, in securing the rudder-head and steering apparatus from the direct impact of shot. The confidence which Admiral Robinson had in the soundness of the views of the new constructor led the Admiralty to call upon him to design two powerful frigates, Lord Warden and Lord Clyde, of a new class, and of 4,000 tons. These ships are each pierced with gun-ports on the main deck from stern to stern, and are armor-plated throughout, the plates being carried up over a topgallant forecastle, to protect two guns firing ahead on the upper deck, in addition to others firing forward and aft on the main deck. Unlike all the other armor-clad ships of the British Navy, therefore, these two carry four powerful guns firing ahead in the line of their keel, which would no doubt render them most formidable examples of what is known in England as the "end-on" system. The armor of these ships is five and a half inches thick at the water-line, and six inches (in two thicknesses of four and a half and one and a half inches) over the battery deck. These ships, however, being of wood, and armed with a large number of guns, not of the largest class, did not fully represent the views of the chief constructor, and accordingly he handed in at the same time the design of another ship, to be built of iron and to carry a less number of very powerful guns under the protection of armor of unusual thickness. This design was also adopted by the Admiralty, and the ship to be built called the Bellerophon—a name which has already become identified with the finest specimen of an iron-clad frigate yet produced in Great Britain.

So great was the simplification introduced into the design of this ship, that she was floated out of dock within twelve months from the laying of the keel, with several hundreds of tons of armor already upon her sides, and in five or six months after she was taken down the Medway to the Nore, for a preliminary trial of her engines and screw, with her armor plating entirely completed, and many of her fittings well in hand. In addition to 6-inch armor, this ship is formed with a double iron skin, which has been found to add very much to the resisting power of her hull. She is armed with 12-ton guns, is to steam 14 knots, and turns under the action of her balanced rudder, which is of the American plan, more handily than any other ship in the navy. Next, the Pallas was commenced for the purpose of protecting British commerce from the American "Alabamas" and "Floridas." She was built of wood, at Woolwich, and is a short, fast, handy ship, and, like the Bellerophon, is full rigged for sea-going purposes. The armor plating is, of course, much inferior in strength to the Bellerophon, and her guns much fewer in number. The whole of these ships (Lord Clyde, Lord

Warden, Bellerophon, and Pallas) are rapidly approaching completion, and will speedily proceed on their sea trials.

Soon after the commencement of these ships, Mr. E. J. Reed received his official appointment of chief constructor of the Navy—he being at the time about thirty-three years of age—attaining this position solely by the merit of the plans submitted by him to the Admiralty, and highly approved by them. After his official appointment, his first vessels were the two iron-clad gunboats, Viper and Vixen, which being of a very light draught of water, afforded but little scope for obtaining superior qualities. The water-line and the engines of these vessels are protected, but the only cover given to the guns is a transverse bulkhead, through which the guns fire over a forecastle deck. Each vessel is fitted with two screw propellers, supported by separate dead woods, so that the stern is double. The Viper is built wholly of iron, and the Vixen with iron frames and wood planking outside, to enable the bottom to be coppered.

The Penelope is also a double-screw ship of iron, but of much larger dimensions, being nearly 3,000 tons. Her armor will be similar to the Bellerophon's, but of less extent, and she is to draw but 16 feet of water. Her cabins are to accommodate an admiral and his staff, and she is intended for service in any part of the world. This ship is but just begun at the Pembroke Dock-Yard, South Wales.

The Hercules will succeed the Bellerophon at Chatham, differing from her but little, except that her armor is to be of a more ponderous character. The outside armor plates are 9 inches thick; then come 12-inch teak-logs, then a double iron skin $1\frac{1}{2}$ inches thick, then 10-inch iron frames, filled in solid with teak, then 18 inches of teak-logs; next to these and supporting them, another iron skin, three-quarters inch thick, this skin being finally supported by iron frames 8 inches deep. A target, constructed in this manner, has been fired at with the most powerful 12-ton guns, with extreme charges of powder and steel projectiles, but even the first iron skin was not penetrated. It is thought that even the 20-ton, 600-pounder gun, will not penetrate it; but this is about to be tried.

A very powerful iron-clad, designed by Mr. Reed, for the Sultan of Turkey, with the sanction of the British Government, to be named the "Turkestan," completed the list of iron-clad ships designed by him during two and a half years that he has been associated with the Admiralty.

In addition to the iron-clads, however, a fleet of 1,000-ton wooden ships, to steam thirteen knots and carry a couple of heavy and a couple

of light guns, have been designed by the chief constructor and built by the Admiralty, the remarkable feature about them being that they are only about one half of the length of fleet wooden sloops now building by the United States Government. These sloops, known as the "Amazon" class, are single screw-vessels; and in addition to them a small double-screw vessel, named the Plover, of only 660 tons, and without armor, has been laid down at Deptford. A paddle steamer, called the Helicon, has also been built from plans of the constructor, and has given good results—steaming a knot an hour faster in smooth water than a similar ship constructed by private parties, and nearly a knot and a half faster in a sea-way.

The latest work of the chief constructor of the British Navy has been to design a fleet of iron transports for conveying troops. These will be noble ships, 360 feet long, 49 broad, drawing 20 feet of water, and to steam at 14 knots, carry 1,250 troops, women, and children, and 200 officers and seamen on board. These ships will cost about £200,000 each, or one million pounds sterling for the five. They are building in private yards, and will be completed in the coming year. The following table will show the progress of the British Navy within two and a half years:

ENGLISH ARMOR-PLATED SHIPS.

SHIPS NAME.	Tons.	H. P.	DRAUGHT OF WATER.		LENGTH.		BREADTH.	
			Forward.	Aft.	Between Perpendiculars.	of Keel.	Extreme.	For Tonnage.
			ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
Enterprise.....	933	160	12 4	15 10	180 0	152 11	36 0	35 0
Research.....	1,253	200	12 3	15 3	195 0	168 3	38 6	37 5
Favorite.....	2,094	400	19 3	22 3	225 0	195 6	46 9	44 10
Pallas.....	2,126	600	18 3	24 3	225 0	187 8	50 0	48 9
Zealous.....	3,716	800	24 6	26 0	252 0	213 9	58 7	57 2
Lord Clyde.....	4,067	1,000	24 0	26 6	280 0	233 11	58 11	57 2
Lord Warden....	4,080	1,000	24 0	26 6	280 0	233 9	59 0	57 3
Bellerophon.....	4,270	1,000	21 0	26 0	300 0	255 3	56 1	56 1
Viper.....	737	160	9 6	10 6	160 0	135 4	32 0	32 0
Vixen.....	754	160	9 9	10 9	160 0	134 10	32 5	32 5
Penelope.....	2,947	600	15 9	16 9	260 0	221 7	50 0	50 0
Hercules.....	4,813	1,100	22 0	26 0	305 0	259 11	59 0	59 0
Turkestan.....	5,938	1,150	24 6	26 6	355 10	310 1	60 0	60 0

ENTERPRISE.—Wooden hull; plating $4\frac{1}{2}$ inches thick; 195 tons used. Nature of backing—a wooden ship with side $19\frac{1}{2}$ inches thick; has 4 $6\frac{1}{2}$ -ton guns on main deck. No. of crew, 129; measured mile, trial speed, in smooth sea, 9.9 knots.

RESEARCH.—Plating $4\frac{1}{2}$ inches thick; 352 tons used. Wooden ship, with side 19 inches thick; 4 $6\frac{1}{2}$ -ton guns on main deck. Number of crew, 135. 10.4 knots measured trial speed in a smooth sea.

FAVORITE.—Plating $4\frac{1}{2}$ inches thick; 560 tons used. Wooden ship, with side 26

inches thick; 8 6½-ton rifled guns, and 2 110-pounder Armstrongs on main deck. Number of crew, 200. Trial speed, measured mile in smooth sea, 11.7 knots.

PALLAS.—Plating 4½ inches thick; 560 tons used. Wooden ship, with side 22 inches thick. Armed with 4 6½-ton rifled, and 2 110-pounder Armstrongs. Number of crew, 225. In smooth sea, trial speed, per measured mile, 13½ knots.

ZEALOUS.—Plating 4½ inches thick; 791 tons used. Wooden ship, with side 30½ inches thick. Armament, 16 6½-ton rifled guns on main deck, and 4 110-pounder Armstrongs on upper deck. Number of crew, 455. Trial speed, per measured mile, in smooth sea, 12 knots.

LORD CLYDE.—Plating, part 4½, part 5½, inches thick; 1,379 tons used. A wooden ship, with side 31½ inches thick. Armed with 20 6½-ton rifled guns on main deck, and 4 110-pounder Armstrongs on upper deck. Number of crew, 605. Trial speed, per measured mile, in smooth sea, 13.7 knots.

LORD WARDEN.—Plating, and the other particulars, same as the "Lord Clyde."

BELLEROPHON.—Iron hull; plating 6 inches thick; 1,089 tons used; backing of 10-inch teak. Armament, 10 300-pounders, 12 tons; 2 110-pounders, bow; 3 do. aft—making 15 guns on main deck, and in addition, 1 40-pounder Armstrong on upper deck. Number of crew, 525. In smooth sea, trial speed per measured mile, 14.2 knots.

VIPER.—Iron hull; 4½ inch plating; 180 tons used; backing 10-inch teak. Armament, 2 100-pounders, 6½ tons, and 2 howitzers, all on main deck. Number of crew, 80. Trial speed in smooth sea, 9.2 knots.

VIXEN.—Hull both of wood and iron; thickness of plating, etc., all same as the Viper.

PENELOPE.—Iron hull; plating part 5 and part 6 inches thick. Number of tons, 680. Backing, part 10 and part 11 inches thick, of teak. Armament, on main deck, 2 100-pounders, 6½ tons, and 2 howitzers; on upper deck, 1 40-pounder Armstrong. Number of crew, 350. Trial speed, per measured mile, in smooth sea, 13.2 knots.

HERCULES.—Iron hull; plating of 6, 8, and 9 inches thickness; 1,425 tons of do. used; teak backing, both 10 and 12 inches' thickness. Armament, 10 300-pounders, 12 tons, on main deck, and 2 64-pounders on upper deck. Number of crew, 550. Trial speed in smooth sea, by measured mile, 16.2 knots.

TURKESTAN.—For the Turkish Government. Iron hull; plating 8 inches thick, with both 10 and 11-inch teak backing; 2,095 tons of plating used. Main deck armament, 29 7-ton guns; upper deck do., 4 7-ton guns. Number of crew, 650. Trial speed in smooth sea, 15 knots.

WOODEN SHIPS, NOT PLATED.

SHIP'S NAME.	Tons.	H. P.	DRAUGHT OF WATER.		LENGTH.		BREADTH.	
			Forward.	Aft.	Between Perpendiculars.	of Keel.	Extrema.	For Tonnage.
			ft. in.	ft. in.	feet.	ft. in.	ft. in.	ft. in.
Helicon.....	835	250	10 0	10 0	220	200 0	28 2	28 0
Amazon.....	1,081	300	13 6	16 9	187	158 3	36 0	35 10
Niobe.....	"	"	"	"	"	"	"	"
Vestal.....	"	"	"	"	"	"	"	"
Nymphe.....	"	"	"	"	"	"	"	"
Blanche.....	"	"	"	"	"	"	"	"
Dryad.....	"	"	"	"	"	"	"	"
Daphne.....	"	"	"	"	"	"	"	"
Plover.....	663	160	9 0	9 6	170	151 7	29 0	28 8

The Helicon has 2 20-pounder Armstrong guns on main deck. Number of crew, 65. Speed, $14\frac{1}{2}$ knots.

The Plover has 1 100-pounder $6\frac{1}{2}$ -ton gun, and 2 40-pounder Armstrongs on the upper deck. Number of crew, 80. Speed, 11 knots.

The others have for armament 2 100-pounder $6\frac{1}{2}$ tons, and 2 64-pounders, all on main deck.

IRON TRANSPORTS.

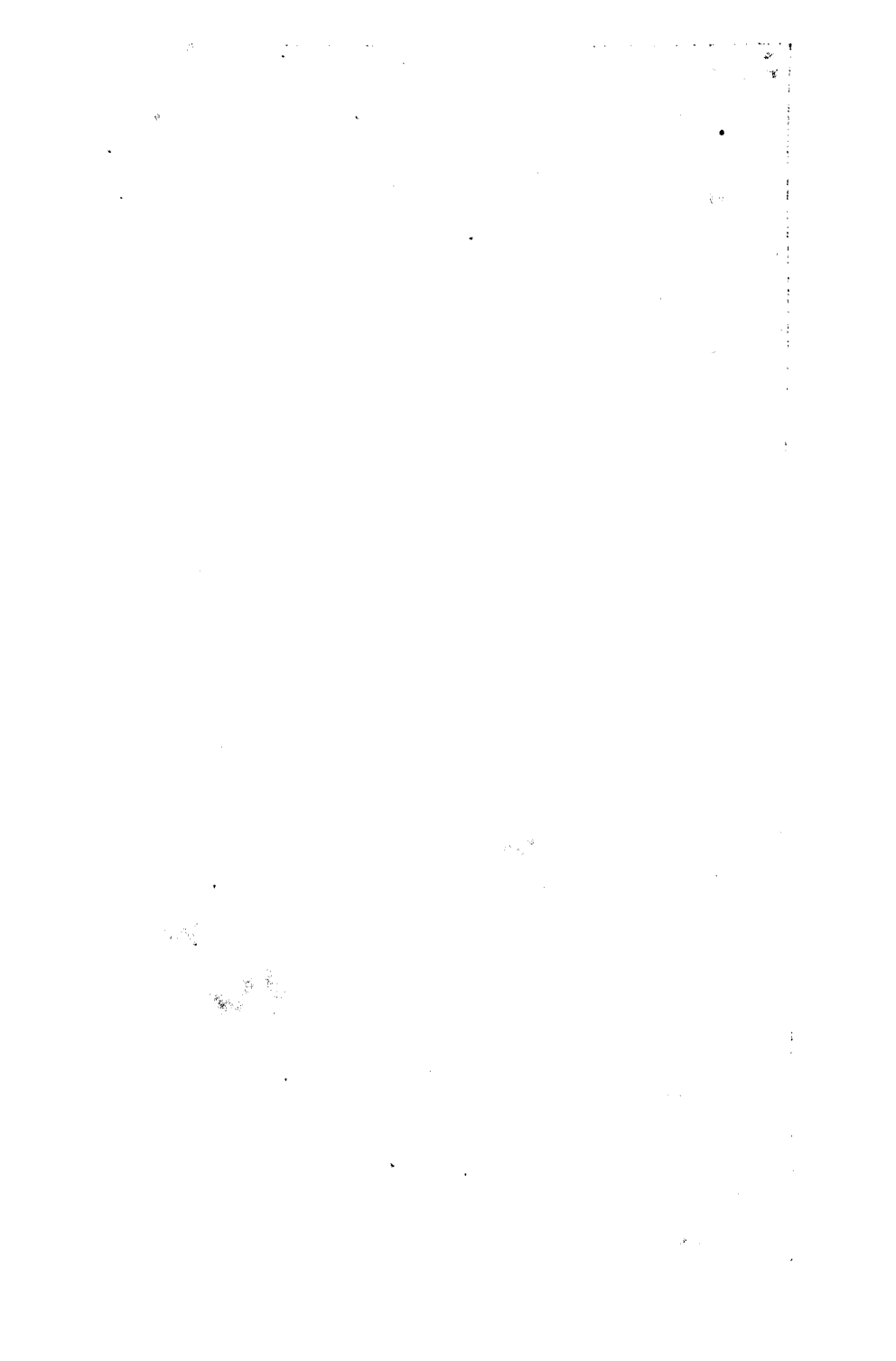
SHIP'S NAME.	Tons.	H. P.	DRAUGHT OF WATER.		LENGTH		BREADTH	
			Forward.	Aft.	Between Perpendiculars.	of Keel.	Extreme.	for Tonnage.
			ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
Crocodile.....	4,173	700	19 0	21 0	360 0	326 9	49 0	49 0
Scrapis.....	"	"	"	"	"	"	"	"
Euphrates.....	"	"	"	"	"	"	"	"
Jumna.....	"	"	"	"	"	"	"	"
Malabar.....	"	"	"	"	"	"	"	"

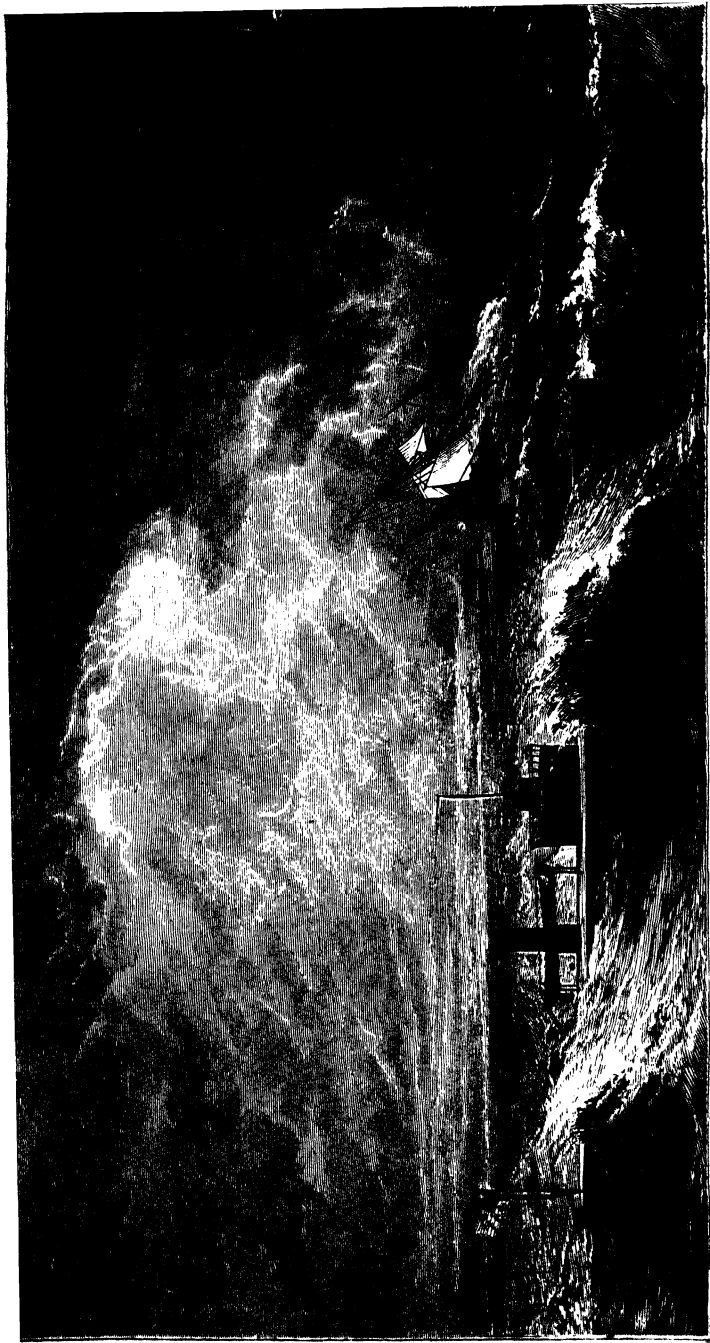
Their armament consists each of 2 40-pounder Armstrong guns on upper deck. Number of crew to each, 200. Speed, 14 knots.

In the foregoing tables the speed is per measured mile in smooth sea, without armament or stores on board. The following is a table of the French Iron-clad Navy at the present time :

IRON-CASED SHIPS OF FRANCE.

SHIP'S NAME.	Displacement.	Horse-Power.	Mean Draught.	Length on Load Line.	Breadth.	Kind of Hull.	Armor Plating.	Weight of Armor.	Speed in Smooth Water.
	Tons.		Feet.	Feet.	Feet.		Inches.	Tons.	Knots.
Magenta....	6,750	1,000	26	280	57	Wood.	$4\frac{1}{2}$	900	$13\frac{1}{2}$
Solferrino....	6,700	1,000	26	280	57	"	"	900	14
Couronne....	6,000	900	25	260	55	Iron.	$4\frac{1}{2}$ & 3	700	13
Gloire.....	5,650	900	$25\frac{1}{2}$	255	56	Wood.	$4\frac{1}{2}$	800	$13\frac{1}{2}$
Invincible....	5,525	900	$25\frac{1}{2}$	255	56	"	"	800	$13\frac{1}{2}$
Normandie...	5,650	900	26	255	56	"	"	800	$13\frac{1}{2}$
Flandre.....	5,700	1,000	25	260	56	"	6	1,000	—
Gauloise.....	5,700	1,000	25	260	56	"	"	"	—
Guyenne.....	5,700	1,000	25	260	56	"	"	"	—
Heroine.....	5,700	1,000	25	260	56	"	"	"	—
Magnanime...	5,700	1,000	25	260	56	Wood.	"	"	—
Provence....	5,700	1,000	25	260	56	"	"	"	14
Revanche....	5,700	1,000	25	260	56	"	"	"	—
Savoie.....	5,700	1,000	25	260	56	"	"	"	—
Surveillante..	5,700	1,000	25	260	56	"	"	"	—
Valeureuse...	5,700	1,000	25	260	56	"	"	"	—
Belliqueuse..	3,850	900	$19\frac{1}{2}$	230	46	"	"	—	—
Taureau.....	2,450	900	16	200	$47\frac{1}{2}$	"	"	800	—
Paixhans....	1,540	150	$8\frac{1}{2}$	156	46	"	$4\frac{1}{2}$	275	7
Palestro.....	1,540	150	$8\frac{1}{2}$	156	46	"	"	"	"
Peiho.....	1,500	150	$10\frac{1}{2}$	150	45	"	"	"	"
Saigon.....	1,500	150	10	156	46	"	"	"	"
Embuscade...	1,225	150	$9\frac{1}{2}$	130	51	Iron.	$5\frac{1}{2}$	—	—
Impregnable..	1,225	150	$9\frac{1}{2}$	130	51	"	"	—	—
Protectrice...	1,225	150	$9\frac{1}{2}$	130	51	"	"	—	—
Refuge.....	1,225	150	$9\frac{1}{2}$	130	51	"	"	—	—
Arrogante....	1,340	150	$8\frac{1}{2}$	145	48	"	"	—	—
Implacable...	1,340	150	$8\frac{1}{2}$	145	48	"	"	—	$7\frac{1}{2}$
Opiniatre....	1,340	150	$8\frac{1}{2}$	145	48	"	"	—	8





MONITOR "WEEHAWKEN," AND THE "IROQUOIS," WEATHERING OUT A GALE,

OPINION OF THE RUSSIAN ADMIRAL.

Rejecting the high sides of vessels, to cover which thousands of pounds of iron would be required, the inventor of the Monitor has gained, in comparison with other armored vessels, the following advantages:

First. A comparative cheapness in construction.

Second. The insignificance of target presented to the enemy's fire.

Third. The safety of the submerged part of the vessel from shots.

Fourth. The possibility of using guns of the heaviest calibres, and capability to give great thickness to the turrets and side armor easier than it could be done on armored vessels of other systems.

The system of Captain Ericsson must not be confounded with the turreted system of Captain Coles. The latter places his turret on a common vessel with pretty high sides, for the protection of which by armor, as was mentioned before, an enormous weight of iron is required. Those are the advantages presented by Captain Ericsson's system. In relation to the execution of details, the first Monitor presented an extensive field for improvement. The famous action in Hampton Roads at the beginning of 1862 compelled the Government of the United States to choose this system of vessels for coast defence in preference to others.

Five large vessels-of-war very nearly became victims to the Merrimack, but were rescued by the timely arrival of the small Monitor, which forced the Merrimack to leave the field of battle.

In reference to artillery, the choice of the American Government fell on the 15-inch Rodman gun. Up to that time the largest guns used in the Navy were 11-inch Dahlgren guns, but the Monitor system is able to use the largest guns, the defeating force of which is more effectual than that of the 11-inch guns.

From that time it may be said that this class of vessels is sufficiently tried in America. We will briefly bring forth some of the most noted occasions in which their merits were exhibited. In order of time the following favorable news concerning Monitors transpired: First was the report by Commodore Rodgers of the storm encountered by him on the Atlantic Ocean on board the Monitor Weehawken. This renowned naval officer went to sea in tow of a steamer in the same way as all Monitors generally make their sea voyages. Near the capes of the Delaware, perceiving the approach of a storm, Commodore Rodgers sent his companion to the nearest port, determined to remain at sea himself to test the Monitor under these circumstances.

In his report he praises the qualities of the Weehawken observed by

him during the storm. The other Monitors have repeatedly made sea passages during the tempestuous winter time. Out of their number only the first Monitor was lost, and that from causes more or less accessory.

After this, we have the intelligence of the action on the Ogeechee against sand-batteries; the distance was from 400 to 600 fathoms, impediments preventing a nearer approach; several other vessels armed partly with mortars participated in the action. The fortifications were completely demolished, though repaired during the night. The absence of land forces prevented the driving of the enemy out of the forts, as the execution of the artillery alone at a distance of 400 fathoms was insufficient for that purpose. One of the enemy's cruisers, the Nashville, attempted to break through the Monitors, but a 15-inch shell decided her fate.

Thereupon follows the attack on Fort Sumter. A careful study of this affair shows that the injuries sustained by the Monitors were more or less of a light character. Many weak points were discovered, also many defects requiring alterations on the vessels already built, and some changes in those that were in process of building; but the main principle on which the system of building these vessels was founded came out of this effective trial with a complete triumph.

The next trial was of a real naval character—a combat between two iron-clads, the Monitor Weehawken against the Atlanta. On both sides much was expected from the issue of this battle, but almost the first shot from the 15-inch gun of the Weehawken decided the affair in her favor.

The Monitors continue to play, if not the principal, still, however, an important part at the siege of Charleston. Continually exposed to the fire of the enemy for several months, they obstinately occupy their position in an almost open roadstead, maintaining a successful blockade of Charleston. All these circumstances certainly speak a great deal more for the usefulness of the Monitors than against them. The last accident to the Weehawken, which unexpectedly foundered in the midst of a whole squadron of similar vessels, while at an anchorage at which those vessels have remained so long a time with impunity, is not investigated, and it may be will only show that these vessels require particular precautions and care, and that it is impossible to treat them as common vessels.

Such, in short, is the substance of the knowledge we have of the Monitors.

In Russia, the Navy Department, in the person of his highness the General Admiral and his nearest assistants, did not cease to follow from

the beginning the trials of armored ship-building in other States, but with prudent caution it was decided not to do any thing until the new vessels had been sufficiently tested. In consequence, after the first battle between iron-clad vessels in America, the Navy Department immediately sent out there several officers belonging to different branches of the naval service to study those new vessels on the spot. Those persons fulfilled the commission with which they were charged in the most successful manner. Their reports confirmed the Navy Department in its conclusions that out of all known systems of iron-clads the Monitor was preferred for our coast defences, especially in our shallow waters. The protection of Cronstadt, our principal naval port, an object of constant and particular solicitude of our Navy Department, presents besides such local conveniences for the use of those vessels as cannot be found everywhere. In consequence of all this, several vessels were commenced on the exact model of the American Monitors. These vessels, destined exclusively for the protection of Cronstadt, rapidly and successfully move to completion. All the improvements, the necessity of which has been proved by experience in America, will be introduced on our vessels, and it is expected that those vessels will be a very effective and necessary addition to our land defences of Cronstadt.

At the same time the Navy Department did not neglect to adopt all measures to provide the new vessels with the most perfect artillery; and we hope that our single-turreted vessels, representing the exact copy of the American Monitors, will be armored with formidable artillery, combine all the new improvements, and give satisfaction to all the demands of contemporary military science.

In addition to this, we did not stop on one system exclusively. With prudent calculation, concentrating all our efforts on means exclusively defensive, we shall have at the same time, besides the Monitors, a few iron-clad vessels representing models of all the principal systems now in use, and which could be adapted to our exclusive and local condition.

In conclusion, we may say we have before us an extensive and vast road for the further study of this question, and investigation of those improvements which are called forth by numerous imperfections of all the systems of iron-clad vessels known at the present time.

In examining the reports of the captains of the Monitors which participated in the bombardment of Fort Sumter, knowing exactly the kind of battle the Monitors were engaged in, the injuries received by them, and remembering that, notwithstanding a severe concentrated fire from the numerous Southern forts, the Federal fleet had only one man killed and

two wounded, we come inevitably to the conclusion that the attack on Charleston positively proves the Monitors capable to compete, and probably with chances of success, with the best iron-clad vessels of the French and English Navies.

It is true that, from injuries received in this battle, the Keokuk was sunk; but it must not be forgotten that, having been constructed on a different system, she was fastened imperfectly in comparison with her companions, the injuries to which, though important, were for the most part of such a character as will be easily provided against on the Monitors that are now being built in our yards and factories.

For instance, on board the vessels that participated in the action of the 7th April, 1863, a great many bolts that fastened the turret-plates were broken. In the pilot-houses and turrets, where there was no inside iron sheathing, the captains and the men at the guns were exposed to great danger from the nuts and ends of bolts rebounding inside. Those nuts and pieces of bolts, falling between the foundations of turrets and decks, prevented the turret from revolving. The fire of the Monitors also was not so very effective, from continual stoppages of the guns. Finally, there were some few more or less important defects and errors.

A well-considered new system of fastening iron plates in turrets, taken from experience, a large iron ring covering the space between the lower part of the turret and the deck, and the 9-inch cast-steel gun, are the means from which we expect a great deal.

Notwithstanding the defects of the American Monitors, the strength shown by them during the bombardment is truly astonishing. The Southerners were firing from guns of the heaviest calibres at distances which probably were carefully measured before the commencement of the action—these distances being smaller than half the distance of an ordinary pointing fire—and yet not one of the monster charges penetrated the turrets. The strongest experience of this kind was sustained by the Passaic, and what was the result? A shot from a gun of a heavy calibre struck the upper edge of the turret, broke eleven plates, but did not penetrate the turret, though the strength of the shock was such that the projectile, rebounding upward, made an indentation of $2\frac{1}{2}$ inches in the pilot-house and bent it on one side; and notwithstanding all this, in the turret proper of the Passaic, as well as in the turrets of the other Monitors, there was no one killed or wounded; a result certainly very important, and which confirms the great superiority of the Monitor system over all other systems of armor-plated vessels.

The fighting test through which the Monitors have passed is certainly more effectual and decisive than the experiments made on plates

representing the sides of a "Warrior" or a "La Gloire;" $4\frac{1}{2}$ inch plates of those were fractured by occasional shots.

We may well ask what would have become of the vessels covered by such plates, and their sides presenting a large target, and if (as it happened with the Nahant) they would be exposed for some time to a concentrated fire of 100 guns at a distance less than 1,500 feet? It is not difficult to answer. Not only the "Warrior," with the "La Gloire," but all those Minotaurs, Northumberlands, Magentas, and Solferinos, constructed on improved models, would be sunk in such circumstances; while the Nahant got out of the action with injuries comparatively not very important.

In examining the reports of the captains, we find several other places confirming the solidity of the Monitors. With the exception of the Keokuk and Passaic, all the vessels of the squadron were in a condition to continue the fight, and it was only the signal of the admiral (to stop the battle) that made them stop the attack. The Monitors Weehawken, Montauk, Patapsco, and Catskill, after a hot action of 40 minutes, had no serious injuries, not only in their turrets, but in any other parts of the vessels. In one word, from whatever side you look upon the results of the battle, they are positively favorable to the Monitor system of constructing vessels, inasmuch as the same is subject to improvements which can be partly adopted on the Monitors building at the present time, and unconditionally on those that are to be built. Passing to the reproach of slowness of fire from the Monitors, it is easy to prove that, taking into consideration the present state of artillery, the number of projectiles fired within a certain specified time is not so very important as is the degree of destruction they produce. Five shots from the Weehawken were quite sufficient to force the Atlanta, a beautiful iron-clad corvette which cost the Southerners a million of dollars, to strike her flag.

And it is certain that nine shots from a 15-inch gun fired by the Passaic in forty-five minutes would do a great deal of harm to the Warrior or Black Prince. In three-quarters of an hour the Federal squadron let out 139 projectiles, excluding 3 shots that the Keokuk made; and remembering that the admiral's ship, the new Ironsides, scarcely participated in the fight, it appears that the mean number of shots fired from the 14 guns of the remaining seven Monitors during the action was nine, or one shot for every five minutes; a result, if not particularly brilliant, still very satisfactory, if we remember that the continual stoppages in firing are partly explained by inevitable accidents in first experiments, and for the most part are set aside by another system of artillery, possible improvements in loading, guns, and port-stoppers.

To these statements would be added parts of a very important report made by the Committee on Naval Affairs in the House of Representatives, January 30, 1865, which presents facts that are perfectly conclusive in regard to the speed of our ships-of-war, facts which completely vindicate the Department from the attacks which have been made in reference to this particular subject. The first of these extracts will show the average speed of vessels constructed before the war:

Names, tonnage, maximum and average speed of the Screw Vessels of the Navy built before the War.

NAME.	Tons' burden.	Maximum speed in knots per hour under steam alone in smooth water.	Average speed at sea in knots per hour with steam and sail.
Niagara.....	4,582	10.9	8.5
Minnesota, Merrimack, Wabash, Roanoke, and Colorado.....	3,774	9.0	6.5
Brooklyn.....	2,070	9.2	8.1
San Jacinto.....	1,446	8.8	7.2
Hartford.....	1,990	9.5	7.3
Lancaster.....	2,362	9.5	7.3
Richmond.....	1,929	7.5	6.5
Pawnee.....	1,289	8.0	6.5
Iroquois, Wyoming, Dakota, and Mohican.....	1,016	11.7	8.0
Narragansett and Seminole.....	809	8.0	6.5

Names, tonnage, maximum and average speed of the Side or Paddle-wheel Vessels of the Navy built before the War.

NAME.	Tons' burden.	Maximum speed under steam alone in knots per hour in smooth water.	Average speed at sea in knots per hour with steam and sail.
Susquehanna.....	2,450	11.0	9.0
Powhatan.....	2,415	11.0	9.0
Mississippi.....	1,692	8.7	7.5
Saranac.....	1,446	9.2	8.0
Saginaw.....	453	9.0	—

The following statements and tables from the same report will enable the reader to compare the ships built since the war began with those constructed before, and also with other vessels:

NAME OF VESSEL.	Number of voyages from New York to Liverpool.	Number of voyages from Liverpool to New York.	Mean length of all the voyages in days and hours.	Average speed of all the voyages in knots per hour.
Paddle-wheel steamers—Cunard line:				
Asia	4	3	12.15 $\frac{1}{2}$	10.04
Arabia	2	2	14.7 $\frac{1}{2}$	8.88
Africa	3	2	18.0	9.78
Persia	5	6	11.3	11.42
Scotia	5	6	10.18 $\frac{4}{10}$	11.80
Mean of all five				10.39
Screw steamers—Cunard line:				
China	1	3	12.2	10.52
Australasia	4	4	11.0 $\frac{1}{2}$	11.54
Mean of the two				11.03
Screw steamers—Liverpool, New York, and Philadelphia Steamship Company:				
Etna	6	5	12.4 $\frac{1}{2}$	10.43
Glasgow	4	3	14.11 $\frac{1}{2}$	8.78
Edinburgh	6	5	13.5	9.62
City of Washington	8	8	11.21	10.70
City of Baltimore	8	8	12.8	10.30
City of Manchester	5	4	12.23	9.81
Mean of all six				9.94

SPEED OF THE FASTEST MERCHANT TRANSATLANTIC STEAMERS.

As a very exaggerated idea is generally had of the speed of the ocean merchant steamers, the following table is given with a view to correct erroneous impressions. It shows the average speed made during the year 1862 by the screw and side-wheel steamers of the Cunard line, and of the screw steamers of the Liverpool, New York, and Philadelphia line, plying between the cities of New York and Liverpool. In computing the speed per hour, the distance is taken at 3,050 geographical miles.

These vessels run at their best speed; they burn all the coal they can from their departure to their arrival, and use their canvas (with which they are well provided) whenever it can be advantageously set. The average of so many voyages in both directions must be very nearly the correct speed that can be permanently sustained under steam alone at sea, uninfluenced by weather, which is neutralized during so long a course of steaming, and in opposite directions; nor should it be over-

looked that this speed corresponds to the vessel's draught of water when her coal and stores are half expended, and not to the deep-load draught of water. The maximum and minimum passages are due purely to favorable or unfavorable weather.

The average speed of the Collins steamers was $13\frac{1}{2}$ knots per hour; that of the Peninsular and Oriental Steamship Company is $11\frac{1}{2}$ knots per hour. All of these vessels, it will be remembered, are of large tonnage, and have models as sharp as it is possible to construct them. On the whole, it may be considered that a medium-sized screw vessel, of the best model, which can permanently sustain $10\frac{1}{2}$ knots per hour at sea, uninfluenced by weather, is a fast merchant steamer.

Principal Screw War-steamers of the United States Navy.

Name of Vessel.	Speed per hour in nautical miles.
Lackawanna.....	12.00
Ticonderoga.....	12.00
Sacramento.....	12.00
Shenandoah.....	12.00
Monongahela.....	12.00
Adirondack and Juniata.....	12.00
Ossipee and Housatonic.....	12.00
Canandaigua.....	12.00
Nipsic, Shawmut, and Nyack.....	12.50
Sagamore, Huron, Cayuga, Chippewa, Aroostook, Chocura, Itasca, Kanawha, Katahdin, Kennebec, Kineo, Marblehead, Owasco, Penobscot, Pinola, Scioto, Tahoma, Wissahickon, Winona.....	10.00
Iroquois.....	11.70
Wyoming.....	11.20
Mohican.....	11.80
Kearsarge.....	11.20
Oneida.....	11.70
Wachusett.....	11.20
Dakota.....	12.00
Tuscarora.....	11.20
Lancaster.....	9.50
Hartford.....	9.50
Richmond.....	7.50
San Jacinto.....	8.50
Wabash.....	9.11
Minnesota.....	8.87
Roanoke.....	8.83
Colorado.....	8.83
Brooklyn.....	9.19

Principal Paddle-wheel Steamers of the United States Navy.

Name of Vessel.	Speed per hour in nautical miles.
Conemaugh.....	11.80
Cimarron.....	11.60
Maratanza.....	10.00
Mahaska.....	11.00
Port Royal.....	11.10
Paul Jones.....	11.11
Genesee.....	10.90
Sonoma.....	11.30
Tioga.....	10.90
Sebago.....	11.00
Octorora.....	11.30
Ascutney, Agawam, Chenango, Chicopee, Eutaw, Iasco, Lenapee, Pontiac, Patuxet, Mattabeset, Mingoe, Massasoit, Metacomet, Mendota, Mackinaw, Otsego, Pontoosuc, Tacony, Sassacus, Sham- rock, Tallapoosa, Wateree, Wyalusing, Osceola.....	13.07
Powhatan.....	11.00
Mississippi.....	8.70
Saranac.....	9.20
Susquehanna.....	11.00

CHAPTER XV.

THE RELIEF OF FORT SUMTER.

ONE of the most important of all the early enterprises of the war has devoted to it only the two following sentences in one of the trusted and widely circulated histories of the rebellion: "The fleet from New York laden with provisions for the garrison had appeared off the bar by noon of the day on which fire was opened, but made no effort to fulfil its errand; to have attempted to supply the fort would have at best involved a heavy cost of life, probably to no purpose. Its commander communicated by signal with Major Anderson, but remained out of range of the enemy's fire till after the surrender, when he returned as he came."*

History is supposed by many to be a revealer as well as a recorder of truth; but it is doubtful whether any paragraph so small as the above has ever before concealed as many important facts. Of course, no intention of concealment is charged upon the writer; but the fact shows that often when the historian thinks he has searched the whole field many very important things may still lie beyond the range of his vision. How much lay hidden in the shadow of these few lines will appear by a relation of facts.

The most perplexing, and probably the most dangerous of the questions first presented to Mr. Lincoln and his advisers, was in regard to the relief of Fort Sumter. Either through the weakness or the complicity, or both, of the preceding administration, an armed insurrection against the Government was treated as if it required no serious intervention, and the

* Greeley, "The American Conflict," vol. i., page 447

seizure of forts, arsenals, mints, and custom-houses, was passed over as if it were merely an innocent amusement. Mr. Buchanan and his counsellors had constrained the little garrison of Fort Sumter to remain without supplies or reinforcements, and to permit the rebels to encircle them with batteries, not only without resistance but without even a protest, while the guns of the fort bore on every point which the conspirators were fortifying; and when Mr. Lincoln came into power Sumter was surrounded by a line of guns to which the little garrison could offer no effectual resistance.

At the time when Mr. Lincoln was inaugurated, the mere relief of the garrison by provisions or troops, difficult as that was, by no means formed the most perplexing part of the problem. The new Government began its contest at almost fatal disadvantage. The plan of the rebel leaders was clearly defined and settled. All understood the common purpose, and all were perfectly united. They were fully determined from the beginning upon separation and independence, and nothing less than this; and were ready to try the issue by war, if that should be needed. At the same time, while making every possible preparation for an armed conflict, they strengthened their accomplices in the North and in Europe by declaring that they desired only peace, only to be left in quiet to manage their own concerns. By adding to this the deceitful doctrine that the citizen owes primary allegiance to his State, and pressing loudly the sovereignty of the States and the sacredness of their soil as against any "*invasion*" by the General Government, they bewildered a portion even of the loyal North and caused it to be widely assumed as a conceded fact, that they were already in fact and by right an independent people, and were seeking only the things that belong to peace; and should the Federal Government attack them, it would be a causeless assault upon an unoffending party. They had thus secured beforehand the pre-sympathies of England and France, who welcomed and in ac-use of the argument without being deceived by the stance Mr. The "peace Democrats" of the North made these statements a staple of their warfare against the Government, and in regard to of loyal men for a time were puzzled. cabinet under

While the peaceable intentions and the sacred to the com-

of the conspirators were thus widely proclaimed and echoed by every friend of their cause at home and abroad, they worked with boldness and untiring energy to possess themselves of every strategic point and every fortification both on the coast and inland, and with almost complete success. They were exceedingly anxious to obtain possession of Fort Sumter, either by inducing the Government to evacuate it or to *attack them*, in order that they might appear to capture it in *self-defence*. They were, however, as the result proved, fully determined to attack and reduce the fort at all hazards, provided other methods should fail.

Some of the chief perils which beset the new Administration in that dark hour are therefore easily seen. Southern commissioners were in Washington ostensibly seeking terms of peaceable separation, and though not *officially* received they were nevertheless in communication with one department of the Government; and as the result has shown, they managed, by busy and ingenious friends, of whom they had so many, to possess themselves of secrets which it was supposed none but the chief officers of the Government knew. If they could obtain a peaceable evacuation of Fort Sumter, they could properly claim it as an acknowledgment of their rights, and virtually of their independence; and they urged this step with so much power as to obtain, as they affirm, an assurance which they received as from due authority, that within a certain number of days Fort Sumter should be evacuated. Of course, Southern evidence must be received only for what it is worth. If, on the other hand, they could provoke the Government to attack them at Charleston, they would, in *self-defence*, capture the fort in a few hours, and Europe could thus cry out, Shame on a Government that attempts to crush a weaker and independent people relating peaceably to govern themselves; and they could

The skill and courage of the Southern army in reducing the great strong casemated fort. Every sympathizer in the South was in readiness to echo the cry, and use it for the overthrow of the weaker party in power.

It seems that these two horns of a dilemma were quite present to Mr. Lincoln and his advisers, but there was another, which also demanded serious attention. The

cowardly or treacherous yielding of the preceding Administration, and the prospect of what many thought would be a tame submission by the new one, had so far destroyed the confidence of the North that the credit of the Government was seriously injured. The loyal people were fast losing confidence in the courage of their leaders, and consequently in the success of their cause, and money therefore was not to be obtained.

These statements will serve perhaps to throw some light upon that mysterious and silent pause which occurred between the 4th of March, 1861, and the early days of April.

Surrounded on all sides by perils, each of which seemed almost equally formidable, pressed by questions for the decision of which there were no precedents, and which involved the life of the nation, time for mature deliberation was absolutely necessary—time to consult the wisest in the land before a step was taken which could not be retraced. At the same time the situation was becoming more dangerous with every hour of delay.

The truly loyal portion of the North was being weakened both by impatience and inaction, and by loss of confidence in the Administration; public credit was sinking, and there was a growing disposition to concede the right of secession, and to say to the conspirators, Go in peace. It is in the light of these facts only that the true history of the attempt to relieve Fort Sumter can be made to appear.

As has been stated in a previous chapter, an armistice had been secretly entered into between the former Administration and the secessionists, and Commodore Barron had been sent out to Pensacola on the 20th of January to prevent any government vessel from entering the harbor, by which order not only were the conspirators left in quiet possession of Pensacola, but Fort Pickens was cut off from receiving any supplies, and would, as a consequence, in due time fall into the hands of the secessionists. Troops sent out by General Scott had already been prevented from landing, in obedience to Toucey's orders, and in accordance with Mr. Buchanan's armistice, of whose existence Mr. Lincoln and his Cabinet at the time knew nothing.

It is quite evident, therefore, that the discussion in regard to the relief of Fort Sumter began in Mr. Lincoln's Cabinet under exceedingly embarrassing circumstances. To add to the com-

plication of affairs, John Forsyth, Martin J. Crawford, and A. B. Roman, styling themselves "Commissioners from the Confederate States," were in Washington to negotiate, according to their own statement, the terms of a peaceable separation; and though not officially received, they were, nevertheless, through Judge Campbell, in official communication with the Government through the State Department. Conversations were there held in the presence of Judge Nelson, of the Supreme Court, who, on the 15th of March, 1861, sanctioned the following note from Judge Campbell to Judge Crawford as the proper inference to be drawn from the assurances which were given: "*I feel entire confidence that Fort Sumter will be evacuated in the next five days.*"

Judge Campbell subsequently declared that he felt authorized to make the following statement in a letter to Jefferson Davis: "Before this letter reaches you, Sumter will have been evacuated."

In addition to this, Mr. Buchanan's policy was sustained by a large party in the North, constituting a power which could not be wholly disregarded. Not only had his Administration decided that a State could not be compelled by force to obey the General Government, but, after much consultation, had determined that no attempt should be made to relieve the garrison of Sumter. Captain Ward, a brave officer of the Navy, who was killed early in the war, on the Potomac, proposed a plan to Mr. Buchanan for relieving the fort, which plan was then deemed practicable by both naval and military men; but it was rejected, and Major Anderson and his men abandoned.

In spite of this dangerous and complicated condition of affairs, the majority of Mr. Lincoln's Cabinet were, at first, in favor of holding and reënforsing the fort. Those who from the first desired to evacuate it, urged that the Government could make its stand at Fort Pickens, with far greater probability of success, and with equal moral effect; and when to this was added afterward the influence of the opinion of General Scott, General Totten, and other distinguished military men, that the completion of the rebel batteries had rendered an approach to the fort impossible, except by an unwarrantable loss of life, it is not strange that the Cabinet should have wavered, or that they

should, at one time, have deemed it wise to evacuate the fort. But it was soon seen that the eyes and hearts of the whole country were so fixed upon Fort Sumter and its beleaguered garrison, that it would be dangerous for the Administration to appear indifferent to its fate. There, in the opinion of the people, the honor of the country was at stake. There the rebels had made their first hostile demonstration. Charleston was regarded as the head and heart of the conspiracy. There the Government was defied and scorned. And the loyal people felt that if the fort was tamely surrendered, it would be a disgrace to the national name. Some in high places declared that the evacuation of Sumter would be treason, and advised the President to make the attempt to relieve it, even if he believed that every ship and man of the expedition would be lost.

Under this pressure from without, the President decided, late in March, 1861, to attempt to succor the fort. Previous to this, Captain G. V. Fox, who was soon afterward appointed Assistant Secretary of the Navy, a gallant officer, of great nautical skill and experience, had laid before the President and Cabinet a plan for the relief of the fort, and offered to lead the expedition himself. The spirit and determination of this officer were shown by the fact that he proposed this, though General Scott, having now declared the scheme impracticable, threw his influence against it; while some tried and loyal officers felt unwilling to risk their reputation in an enterprise which seemed to them to promise little but failure. It was thought, however, by Mr. Lincoln, that an earnest and gallant attempt to relieve that starving garrison, even though a failure, would maintain the honor of our flag, and raise the spirits of the people.

The determination of the President, and the precise plan of Captain Fox were, of course, known to each member of the Cabinet, and to any others, if such they were, who were in their confidence. If, therefore, a disposition existed anywhere to defeat the expedition, a fair opportunity was presented. No intention of this kind is charged upon any one; but by one of those curious coincidences which sometimes occur, the only thing which could have prevented the success of the plan was actually done.

The method of relief proposed by Captain Fox required one

steam-frigate for carrying three hundred (300) sailors, to be landed, if necessary, in boats, and a full complement of armed launches, two smaller steamers, and three tugs. Without the frigate, and the sailors and launches she was to carry, the execution of the plan was impossible. It was well known to the Cabinet that only a single frigate suitable for this service was then on the Atlantic coast—the Powhatan, at New York.

On the 28th of March the President wrote to the Secretary of the Navy, directing him to fit out an expedition as soon as practicable, for the relief of Fort Sumter. The expedition was under the orders of the War Department, and the Navy was to coöperate. Of course, this order covered the use of all vessels and means at the Secretary's disposal, which the execution of the order required. It included, from necessity, the Powhatan, because without that frigate nothing could be done. Moreover, the Powhatan was actually included in formal orders, as will appear from the following telegrams. The first orders the Powhatan to be held in readiness for sea, and is as follows :

WASHINGTON, D. C., April 1, 1861—Received at Brooklyn 4.10 P. M.

To Commodore S. L. BREESE, Navy-Yard :

The Department revokes its orders for the detachment of the officers of the Powhatan, and the transfer and discharge of her crew. Hold her in readiness for sea service.

GIDEON WELLES, *Secretary of the Navy.*

The second is from Mr. Lincoln himself, and is as follows :

WASHINGTON, D. C., April 1, 1861—Received at Brooklyn, 6.50 P. M.

To the Commandant of the Navy-Yard :

Fit out the Powhatan to go to sea at the earliest possible moment, under sealed orders. Orders by a confidential messenger go forward to-morrow.

ABRAHAM LINCOLN.

The third is from the Secretary of the Navy, and, as it appears, was sent at the same time with the one from the President, for both were received at Brooklyn at the same time, 6.50 P. M. It is as follows :

WASHINGTON, D. C., April 1, 1861—Received at Brooklyn 6.50 P. M.

To Commandant of Navy-Yard :

Fit out Powhatan to go to sea at the earliest possible moment.

GIDEON WELLES, *Secretary of the Navy.*

These telegrams show, either that the President was acting in concert with the Secretary in regard to the Powhatan, and that he gave the order for detaching her without knowing its import, or, if he knew that the order which he signed related to the Powhatan, *he did not know* that to take her would interfere with the expedition to Sumter, for he afterward expressly disavowed any intention to do so, and ordered, when too late, that the frigate should proceed to Sumter, and that the Secretary's orders should be carried out. Whatever, then, may have been the design, if any, in interfering with the expedition, the President was not a party to the plan.

The Secretary acted with the utmost promptness. Orders were immediately issued to have the sailors ready, and to prepare the Pawnee, the Harriet Lane, the Pocahontas, and the Powhatan for the expedition.

On the 30th of March the President sent Captain Fox to New York with verbal instructions to prepare for the execution of his plan. These preparations were duly made. The Powhatan, the Pawnee, the Pocahontas, and the Harriet Lane were got ready for sea, and on the 6th of April the Powhatan sailed. On that day her commander, Captain Mercer, received an order, signed by the President, detaching the Powhatan from the service to which she had been assigned, and placing her under the command of Lieutenant D. D. Porter. The President afterward declared that he signed this order without the least idea that it was to deprive Captain Fox of one of his ships, and he probably did not remember the names of the vessels which had been designated for Fort Sumter. Captain Fox did not sail until two days after the Powhatan, but he received no intimation that her destination had been changed, and supposed she had gone on to Charleston in obedience to orders. There was a very good reason for this. The order to change her course did not pass through the Navy Department at all. Secretary Welles knew nothing of the matter until it was too late to interfere. The manner in which it came to his knowledge is also worthy of being recorded. When the officers who were sent to take the Powhatan out of the hands of her commander found that their orders conflicted with those of the Secretary of the Navy, they telegraphed to the Secretary of State, by whom

their order had been procured from the President. Mr. Seward called upon the Secretary of the Navy, at Willard's, at about eleven o'clock P. M. on the day that the Powhatan sailed from New York, and said there was some trouble in New York about the Powhatan. Mr. Welles, upon learning the facts, informed the Secretary of State that the Powhatan had been ordered by the Navy Department, and by direction of the President, to the relief of Fort Sumter. It was proposed that they should call on the President in order that the question might be settled. Mr. Lincoln had forgotten that the Powhatan had been ordered to go on the Fort Sumter expedition; and, although it was then midnight, Secretary Welles went to the Navy Department, and procured and showed him the original order.

The President then declared that the orders of the Secretary of the Navy must not be interfered with, and ordered the Powhatan to be restored to her original destination. A telegram was sent by the Secretary of State to New York, but because it was too late, or for some other reason, the Powhatan was not stopped, and in consequence the expedition to Fort Sumter failed. At about the same time an operator in a telegraph office brought to Secretary Welles a telegram which had been forwarded to Charleston, and which he deemed of too much public importance to remain unknown. It informed the Confederates that an attempt was being made to relieve Fort Sumter, and on the receipt of this message at Charleston, the Confederates opened their fire, and the fort was soon surrendered.

The details of the expedition, and the failure in consequence of the absence of the Powhatan, are fully set forth in the following statement of Captain Fox, which is an important part of the history :

MEMORANDUM OF FACTS CONCERNING THE ATTEMPT TO SEND
SUPPLIES TO FORT SUMTER IN 1861.

January 5, 1861, whilst in New York, I heard that a steamer, belonging to M. O. Roberts, was about to leave, to carry supplies to the garrison of Fort Sumter. When an officer in the Navy, I had commanded one of the United States mail steamers belonging to the line of which Mr. Roberts was president, and therefore I believed it possible for me to obtain command of the vessel designated to take supplies and

troops to that fort. Upon visiting the office of the company, in West Street, I found that Captain McGowan had been appointed to the command, and that this steamer, named the *Star of the West*, had returned from her voyage, having been turned back by the rebel batteries of Morris Island. On the 9th of January, I called upon my friend George W. Blunt, Esq., of New York, and expressed to him my views as to the possibility of relieving the garrison, and the dishonor which would be justly merited by the Government, unless immediate measures were taken to fulfil this sacred duty.

Mr. Blunt asked me to explain my plan to him, which I did, as follows :

From the outer edge of the Charleston bar, in a straight line to Sumter, through the Swash Channel, the distance is four miles, with no shoal spots having less than nine feet at high water. The batteries on Morris and Sullivan's Islands are about two thousand six hundred yards apart, and between these troops and supplies must pass. I proposed to anchor three small men-of-war off the entrance to the Swash Channel, as a safe base of operations against any naval attack from the enemy.

The soldiers and provisions to be carried to the Charleston bar in the Collins steamer *Baltic* ; all the provisions and munitions to be put up in portable packages, easily handled by one man. The *Baltic* to carry three hundred extra sailors, and a sufficient number of armed launches, to land all the troops at Fort Sumter in one night.

Three steam-tugs, of not more than six feet draught of water, such as are employed for towing purposes, were to form part of the expedition, to be used for carrying in the troops and provisions, in case the weather should be too rough for boats.

With the exception of the men-of-war and tugs, the whole expedition was to be complete on board the steamer *Baltic*, and its success depended upon the possibility of running past batteries at night, which were distant from the centre of the channel one thousand three hundred yards. I depended upon the barbette guns of Sumter to keep the channel between Morris and Sullivan's Islands clear of rebel vessels at the time of entering.

Mr. Blunt and myself discussed the plan over a chart, and he communicated it to Charles H. Marshall and Russell Sturges, and they all approved it, and Mr. Marshall agreed to furnish and provision the vessels without exciting suspicion.

February 4th, Mr. Blunt came to my hotel with a telegram from Lieutenant-General Scott, requesting my attendance at Washington. I left the next day, and breakfasted with the General on the 6th instant.

At 11 A. M. I met at his office, by arrangement, Lieutenant Hall, who had been sent from Sumter by Major Anderson. In the General's presence we discussed the question of relieving Fort Sumter. Lieutenant Hall's plan was to go in with a steamer, protected by a vessel on each side loaded with hay. I objected to it for the following reasons: first, a steamer could not carry vessels lashed alongside in rough water; and second, in running up the channel, she would be bows on to Fort Moultrie, and, presenting a large fixed mark without protection ahead, would certainly be disabled.

Lieutenant-General Scott approved my plan, and, on the 7th of February, introduced me to Mr. Holt, the Secretary of War, to whom I explained the project, and offered my services to conduct the party to the fort. Mr. Holt agreed to present the matter to President Buchanan that evening.

The next day, the 8th of February, news was received of the election of Jefferson Davis by the Montgomery Convention. I called upon General Scott, and he intimated to me that probably no effort would be made to relieve Fort Sumter. He seemed much disappointed and astonished; I therefore returned to New York on the 9th of February.

On the 12th of March I received a telegram from Postmaster-General Blair to come to Washington, and I arrived there on the 13th. Mr. Blair having been acquainted with the proposition I presented to General Scott under Mr. Buchanan's administration, sent for me to tender the same to Mr. Lincoln, informing me that Lieutenant-General Scott had advised the President that the fort could not be relieved, and must be given up. Mr. Blair took me at once to the White House, and I explained the plan to the President; thence we adjourned to Lieutenant-General Scott's office, where a renewed discussion of the subject took place.

The General informed the President that my plan was practicable in February, but that the increased number of batteries erected at the mouth of the harbor since that time, rendered it impossible in March.

Finding there was great opposition to any attempt at relieving Fort Sumter, and that Mr. Blair alone sustained the President in his policy of refusing to yield, I judged that my arguments in favor of the practicability of sending in supplies would be strengthened by a visit to Charleston and the fort.

The President readily agreed to my visit, if the Secretary of War and General Scott raised no objections. Both of these gentlemen consenting, I left Washington on the 19th of March, and passing through Richmond and Wilmington, reached Charleston the 21st. I travelled

the latter part of the way with Mr. Holmes, of California, formerly a member of Congress from South Carolina, in the days of Calhoun. At Florence Station we met Mr. Keitt, a member of Congress from South Carolina when that State attempted to secede. He welcomed Mr. Holmes very warmly, and inquired, with great anxiety, whether Sumter was to be given up. Mr. Holmes said, "Yes, I know it;" which seemed to give Mr. Keitt much satisfaction, but he insisted upon knowing his authority. Mr. Holmes said, "I have the highest authority for what I say;" and upon Mr. Keitt again asking who, he leaned toward him, and at that moment the engine-whistle gave a screech for starting, so that the conversation closed, and I lost the name.

At a station near Charleston, Mr. Huger, formerly postmaster under President Buchanan, got into the cars, and had an interview with Mr. Holmes, during which the same assurances were repeated, relative to the certainty of the evacuation of Fort Sumter. Mr. Huger seemed much depressed with the condition of affairs. At Charleston, I sought an interview with Captain Hartstein, formerly of the United States Navy, and to him I stated my desire to visit Major Anderson; not finding General Beauregard, he introduced me to Governor Pickens, to whom I showed the order under which I acted. After considerable delay, he directed Captain Hartstein to take me to Fort Sumter; and whilst the boat was preparing, I had an interview with General Beauregard. We reached Fort Sumter after dark, and remained about two hours.

Major Anderson seemed to think it was too late to relieve the fort by any other means than by landing an army on Morris Island. He agreed with General Scott that an entrance from the sea was impossible; but as we looked out upon the water from the parapet, it seemed very feasible, more especially as we heard the oars of a boat near the fort, which the sentry hailed, but we could not see her through the darkness until she almost touched the landing.

I found the garrison getting short of supplies, and it was agreed that I might report that the 15th of April, at noon, would be the period beyond which he could not hold the fort unless supplies were furnished.

I made no arrangements with Major Anderson for reënforcing or supplying the fort, nor did I inform him of my plan.

Upon my return, I had the honor to be called frequently before the President, and, in the presence of different members of his Cabinet, to answer the objections presented by Lieutenant-General Scott and the military authorities; but as my project simply involved passing batteries, with steamers or boats, at night, at right-angles to their line of fire, and

one thousand three hundred yards distant, a feat of which the Crimean War furnished many safe examples, I maintained the proposition, and suggested that it was a naval plan, and should be decided by naval officers.

The President asked me if there was any naval officer of high authority in Washington who would sustain me, and if so to bring him to the White House. I knew that Commodore Stringham was at that time filling the position of detailing officer in the Navy Department, and I took him to the President, where, in the presence of Lieutenant-General Scott, he not only confirmed my views, but said that he had that morning held a conversation with Commodore Stewart, who declared that Fort Sumter could easily be reënforced and provisioned with boats at night.

As valuable time was being lost by discussions, which form no part of this narrative, I represented that so important an expedition required time for its preparation, and that I ought to be allowed to take the preparatory steps, if there was any possibility of sending it out.

On the 13th of March, the President sent me to New York with verbal instructions to prepare for the voyage, but to make no binding engagements.

After consultation with George W. Blunt, Esq., who throughout had been of great assistance to me with his advice and active coöperation, I met, by previous arrangement, Messrs. William H. Aspinwall and Charles H. Marshall, for the purpose of making with them preliminary arrangements for the voyage.

Mr. Marshall declined to aid me, upon the ground that the attempt to relieve Fort Sumter would kill the proposed loan and bring on civil war, and that the people had made up their minds to abandon Sumter, and make the stand upon Fort Pickens.

On the 2d of April I had not received the written authority which I expected from the Government, therefore I returned to Washington.

Delays, which belong to the secret history of this period, prevented a decision until the afternoon of the 4th of April, when the President sent for me, and said that he had decided to let the expedition go, and that a messenger from himself would be sent to the authorities of Charleston, before I could possibly get there, to notify them that no troops would be thrown into Sumter if provisions were allowed peacefully to be sent to the garrison. I mentioned to the President that, by the time I should arrive at New York, I would have but nine days in which to charter and provision the vessels, and reach the destined

point, six hundred and thirty-two miles distant. He answered,* I should best fulfil my duty to my country to make the attempt. The Secretary of the Navy had in commission, in the Atlantic waters of the United States, only the Powhatan, the Pocahontas, and the Pawnee; all these he placed at my disposal, as well as the revenue steamer Harriet Lane, and directed me to give all the necessary orders. The Powhatan, which had recently returned and gone out of commission, was added to the force I designated, to enable me to have her fine boats and crew for landing the supplies.

I suggested to the Secretary of the Navy to place Commodore Stringham in command of the naval force; but upon consulting with that distinguished officer, he considered it to be too late to be successful, and likely to ruin the reputation of the officer who undertook it then.

I arrived at New York on the 5th of April, engaged the steamer Baltic of Mr. Aspinwall, who used every possible exertion to get her ready for sea, and delivered confidential orders, embracing all my wants, to Colonel H. L. Scott, aide to the General-in-chief, and Colonel D. D. Tompkins, quartermaster.

Colonel Scott ridiculed the idea of Government relieving Fort Sumter, and, by his indifference and delay, half a day of precious time was lost. The recruits that he finally furnished to me were totally unfit to be thrown into a fort likely to be attacked by the rebels.

I placed the hiring of three tugs in the hands of Russell Sturges, who labored very energetically, but he found great difficulty in obtaining from the owners, tugs to go to sea. Finally, three were promised at exorbitant rates—namely, the Yankee, which I fitted to throw hot water, the Uncle Ben, and the Freeborn. The question of supplies introduced me to Major Eaton, of the Commissary Department, who thanked God that an attempt was to be made to relieve Major Anderson's command, and, from the energetic and enthusiastic coöperation of this officer, the expedition was immediately provisioned for all contingencies.

The frigate Powhatan, Captain Mercer, sailed on the 6th of April, 1861; the Pawnee, Commander Rowan, on the 9th; the Pocahontas, Captain Gillis, on the 10th; the Harriet Lane, Captain Faunce, on the 8th; the tug Uncle Ben on the 7th; the tug Yankee on the 8th; and the Baltic, Captain Fletcher, dropped down to Sandy Hook on the evening of the 8th, and went to sea at 8 A. M. of the 9th.

The officers of the army who accompanied the military force were, First-Lieutenant Edward McK. Hudson, First-Lieutenant Robert O. Tyler, and First-Lieutenant C. W. Thomas.

* Soon after leaving Sandy Hook, a heavy gale of wind set in, which continued during the whole passage. At 3 A. M. of the 12th, we reached the rendezvous off Charleston, and communicated with the Harriet Lane, the only vessel which had arrived. At 6 A. M. the Pawnee was seen standing in. I boarded her, and informed her commander of my orders to offer to send in provisions, and asked him to stand in to the bar with me. He replied that his orders required him to remain ten miles east of the light, and await the Powhatan, and that he was not going in there to inaugurate civil war. I then stood in toward the bar, followed by the Harriet Lane, Captain Faunce, who cheerfully accompanied me.

As we neared the land, heavy guns were heard, and the smoke and shells from the batteries, which had just opened fire upon Sumter, were distinctly visible.

I immediately stood out to inform Captain Rowan, of the Pawnee, but met him coming in. He hailed me, and asked for a pilot, declaring his intention of standing into the harbor, and sharing the fate of his brethren of the army. I went on board, and informed him that I would answer for it; that the Government did not expect any such gallant sacrifice, having settled maturely upon the policy indicated in the instructions to Captain Mercer and myself. No other naval vessels arrived during this day; but the steamer Nashville, from New York, and a number of merchant vessels, reached the bar, and awaited the result of the bombardment, giving indications to those inside of a large naval fleet off the harbor. The weather continued very bad, with a heavy sea; neither the Pawnee nor Harriet Lane had boats or men to carry in supplies. Feeling sure that the Powhatan would arrive during the night, as she had sailed from New York two days before us, I stood out to the appointed rendezvous, and made signals all night. The morning of the 13th was thick and foggy, with a very heavy ground-swell. The Baltic, feeling her way in, ran ashore on Rattlesnake Shoal, but soon got off without damage. On account of the very heavy swell, she was obliged to anchor in deep water, several miles outside of the Pawnee and Harriet Lane.

Lieutenant Robert O. Tyler, an officer of very great zeal and fidelity, though suffering from sea-sickness, as were most of the recruits, organized a boat's crew, and exercised them, notwithstanding the heavy sea, for the purpose of having at least one boat, in the absence of the Powhatan's, to reach Fort Sumter. At 8 A. M. I took this boat, and in company with Lieutenant Hudson pulled in to the Pawnee. As we approached that vessel, a great volume of black smoke issued from Fort

Sumter, through which the flash of Major Anderson's guns still replied to the rebel fire. The quarters of the fort were on fire, and most of our military and naval officers believed the smoke to proceed from an attempt to smoke out the garrison with fire-rafts.

As it was the opinion of the officers that no boats with any load in them could have reached Sumter in this heavy sea, and no tug-boats had arrived, it was proposed to capture a schooner near us, loaded with ice, which was done, and preparations were at once commenced to fit her out, and load her for entering the harbor the following night. I now learned, for the first time, that Captain Rowan had received a note from Captain Mercer, of the Powhatan, dated at New York, the 6th, the day he sailed, stating that the Powhatan was detached, by order of superior authority, from the duty to which she was assigned off Charleston, and had sailed for another destination. I left New York two days afterward, without any intimation of this change.

At 2 P. M. the Pocahontas arrived, and at half-past two the flag of Sumter was shot away, and not again raised. A flag of truce was sent in by Captain Gillis, and arrangements made to place Major Anderson and his command on board the Baltic to return North.

The fort was evacuated Sunday, the 14th of April. Monday, the 15th, the steamer Isabel took the garrison outside to the steamer Baltic, which left that evening direct for New York, where she arrived the forenoon of the 18th instant.

My plan for supplying Fort Sumter required three hundred sailors, a full supply of armed launches, and three tugs.

The Powhatan carried the sailors and launches, and when this vessel was about to leave, in obedience to the orders of the Secretary of the Navy, two officers, Lieutenant D. D. Porter, United States Navy, and Captain M. C. Meigs, United States Engineers, presented themselves on board with an order from the President of the United States, authorizing the former to take any vessel whatever in commission, and proceed immediately to the Gulf of Mexico. This order did not pass through the Navy Department, and was unknown to the Secretary of the Navy, and, when signed by the President, he was not conscious that his signature would deprive me of the means to accomplish an object which he held to be of vital importance.

In a letter from him, which is annexed, he hastened to affirm that "the attempt" to provision Fort Sumter had advanced the cause of the country.

The tug Freeborn was not permitted to leave New York. The tug Uncle Ben was driven into Wilmington by the violence of the gale, and

subsequently captured by the rebels. The tug *Yankee* reached Charleston bar a few hours after the *Baltic* had left with Major Anderson's command on board.

The communications between New York and Washington having been severed, I applied to Mr. Aspinwall to obtain for me a small steamer with arms and ammunition to enable me to reach the Chesapeake Bay, where I judged that armed steamers were very essential. This gentleman applied to Mr. William B. Astor, who very generously gave him a check for five thousand dollars. With this he procured the tug *Yankee*, and persuaded Commodore Breese, commandant of the New York Navy-Yard, to arm and fit her out; and having received from that officer an appointment as acting lieutenant in the Navy, I left on the 26th for Hampton Roads, where I reported to Commodore Pendergrast, of the *Cumberland*.

The services of the *Yankee* not being required at this point, I proceeded to Annapolis, and offered my vessel to General Butler, who was about opening communications with Washington. The General gratefully received the steamer, and sent me through to the capital to report to the President, and immediately afterward I received an appointment in the Navy Department.

Annexed are copies of orders and letters relating to the narrative which I have submitted.

Very respectfully yours,

G. V. Fox, *Assistant Secretary of the Navy.*

February 8, 1861.

Lieutenant-General WINFIELD SCOTT, United States Army :

SIR,—The proposition which I had the honor to submit to you fully, in person, is herewith presented in writing. Lieutenant Hall and myself have had several free conferences, and if he is permitted by the South Carolina authorities to reënter Fort Sumter, Major Anderson will comprehend the plan for his relief. I consider myself very fortunate in having proposed a project which meets the approval of the General-in-chief, and I ask no reward but the entire conduct of the plan, exclusive of the armed vessels. The commander of these should be ordered to coöperate with me by affording protection and destroying their naval preparations near the bar, leaving to me, as the author of the plan, the actual operations of relief.

I suggest that the *Pawnee* be immediately sent to the Delaware breakwater to await orders, the *Harriet Lane* to be ready for sea, and some arrangement entered into by which the requisite steamer and tugs should be engaged, at least so far as not to excite suspicion. I should prefer one of the Collins steamers. They are now being prepared for

sea, and are of such a size and power as to be able fearlessly to run down any vessels which might attempt to capture us outside by *coup de main*. I could quietly engage one, and have her ready to start on twenty-four hours' notice, without exciting suspicion. I shall leave for New York at 3 P. M., and any communications previous will find me at Judge Blair's. If the Pawnee's pivot-gun is landed, it should certainly be remounted.

Very respectfully, etc.,
G. V. Fox.

HEADQUARTERS OF THE ARMY, WASHINGTON, *March 19, 1861.*

DEAR SIR: In accordance with the request contained in a note from the Secretary of War to me, of which I annex a copy, I request that you will have the goodness to proceed to Charleston, S. C., and obtain permission, "if necessary," to visit Fort Sumter, in order to enable you to comply with the wish expressed in the Secretary's note. Please, on your return, to report accordingly.

G. V. Fox, *Esq.*

I remain yours, etc.,

WINFIELD SCOTT.

EXECUTIVE MANSION, WASHINGTON, *April 1, 1861.*

Lieutenant D. D. Porter will take command of the steamer Powhatan, or any other United States steamer ready for sea which he may deem most fit for the service to which he has been assigned by confidential instructions of this date.

All officers are commanded to afford him all such facilities as he may deem necessary for getting to sea as soon as possible.

He will select the officers to accompany him.

Recommended:

ABRAHAM LINCOLN.

WILLIAM H. SEWARD.

EXECUTIVE MANSION, *April 1, 1861.*

Lieutenant D. D. PORTER, United States Navy:

SIR,—You will proceed to New York, and, with the least possible delay, assuming command of any naval steamer available, proceed to Pensacola harbor, and at any cost or risk prevent any expedition from the mainland reaching Fort Pickens or Santa Rosa Island.

You will exhibit this order to any naval officer at Pensacola, if you deem it necessary, after you have established yourself within the harbor, and will request coöperation by the entrance of at least one other steamer.

This order, its object, and your destination will be communicated to no person whatever until you reach the harbor of Pensacola.

Recommended:

ABRAHAM LINCOLN.

WILLIAM H. SEWARD.

WASHINGTON, EXECUTIVE MANSION, *April 1, 1861.*

All officers of the Army and Navy to whom this order may be exhibited will aid by every means in their power the expedition under the command of Colonel Harvey Brown, supplying him with men and material, and coöperating with him as he may desire.

A true copy:

ABRAHAM LINCOLN.

M. C. MEIGS, *Captain of Engineers,*
Chief Engineer of said Expedition.

[CONFIDENTIAL.]

WASHINGTON CITY, *April 2, 1861.*

SIR: Circumstances render it necessary to place in command of your ship (and for a special purpose) an officer who is fully informed and instructed in relation to the wishes of the Government, and you will therefore consider yourself detached. But in taking this step, the Government does not in the least reflect upon your efficiency or patriotism; on the contrary, have the fullest confidence in your ability to perform any duty required of you. Hoping soon to be able to give you a better command than the one you now enjoy, and trusting that you will have full confidence in the disposition of the Government toward you,

I remain, etc., ABRAHAM LINCOLN.

Captain S. MERCER, United States Navy.

A true copy:

M. C. MEIGS, *Captain of Engineers,*
Chief Engineer of Expedition of Colonel Brown.

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE, }
Wednesday, April 4, 1861.

SIR: By direction of the War Department, you will charter such vessels as Captain G. V. Fox, the bearer of this, may designate, for such times and with such supplies as he may indicate.

I am, sir, very respectfully, your obedient servant,

L. THOMAS, *Adjutant-General.*

Colonel D. D. TOMPKINS,

Assistant Quartermaster-General, New York, N. Y.

[CONFIDENTIAL.]

HEADQUARTERS OF THE ARMY, WASHINGTON. *April 4, 1861.*

SIR: This letter will be handed to you by Captain G. V. Fox, ex-officer of the Navy, and a gentleman of high standing, as well as possessed of extraordinary nautical ability. He is charged by high authority here with the command of an expedition (under cover of certain ships

of-war) whose object is to reënforce Fort Sumter. To embark with Captain Fox, you will cause a detachment of recruits, say about two hundred, to be immediately organized at Fort Columbus, with a competent number of officers, army ammunition, and subsistence; a large surplus of the latter, indeed, as great as the vessels of the expedition will take, with other necessities, will be needed for the augmented garrison of Fort Sumter. The subsistence and other supplies should be assorted like those which were provided by you and Captain Ward, of the Navy, for a former expedition. Consult Captain Fox and Major Eaton on the subject, and give all necessary orders, in my name, to fit out the expedition, except that the hiring the vessels will be left to others.

Some fuel must be shipped. Oil, artillery implements, fuses, cordage, slow match, mechanical levers, and guns, etc., etc., should also be put on board. Consult also, if necessary (confidentially), Colonel Tompkins and Major Thornton.

Respectfully yours,

WINFIELD SCOTT.

Lieutenant-Colonel H. L. SCOTT, Aide-de-Camp, etc., etc.

WAR DEPARTMENT, WASHINGTON, April 4, 1861.

SIR: It having been decided to succor Fort Sumter, you have been selected for this important duty. Accordingly, you will take charge of the transports in New York having the troops and supplies on board to the entrance of Charleston harbor, and endeavor, in the first instance, to deliver the subsistence. If you are opposed in this, you are directed to report the fact to the senior naval officer off the harbor, who will be instructed by the Secretary of the Navy to use his entire force to open a passage, when you will, if possible, effect an entrance and place both the troops and supplies in Fort Sumter.

I am sir, very respectfully, your obedient servant,

SIMON CAMERON, *Secretary of War.*

Captain G. V. Fox, Washington, D. C.

NAVY DEPARTMENT, April 5, 1861.

Captain SAMUEL MERCER, commanding U. S. Steamer Powhatan, N. Y.:

The United States steamers Powhatan, Pawnee, Pocahontas, and Harriet Lane will compose a naval force under your command, to be sent to the vicinity of Charleston, S. C., for the purpose of aiding in carrying out the objects of an expedition of which the War Department has charge.

The primary object of the expedition is to provision Fort Sumter, for which purpose the War Department will furnish the necessary trans-

ports. Should the authorities of Charleston permit the fort to be supplied, no further particular service will be required of the force under your command; and after being satisfied that supplies have been received at the fort, the Powhatan, Pocahontas, and Harriet Lane will return to New York, and the Pawnee to Washington.

Should the authorities at Charleston, however, refuse to permit, or attempt to prevent the vessel or vessels having supplies on board from entering the harbor, or from peaceably proceeding to Fort Sumter, you will protect the transports or boats of the expedition in the object of their mission, disposing of your force in such manner as to open the way for their ingress, and afford, so far as practicable, security to the men and boats, and repelling by force, if necessary, all obstructions toward provisioning the fort and reënforcing it; for in case of a resistance to the peaceable primary object of the expedition, a reënforcement of the garrison will also be attempted. These purposes will be under the supervision of the War Department, which has charge of the expedition. The expedition has been intrusted to Captain G. V. Fox, with whom you will put yourself in communication, and coöperate with him to accomplish and carry into effect its object.

You will leave New York with the Powhatan in time to be off Charleston bar, ten miles distant from and due east of the light-house, on the morning of the 11th instant, there to await the arrival of the transport or transports with troops and stores. The Pawnee and Pocahontas will be ordered to join you there at the time mentioned, and also the Harriet Lane, which latter vessel has been placed under the control of this Department for this service.

On the termination of the expedition, whether it be peaceable or otherwise, the several vessels under your command will return to the respective ports, as above directed, unless some unforeseen circumstance should prevent. I am, respectfully, your obedient servant,

GIDEON WELLES, *Secretary of the Navy.*

NAVY DEPARTMENT, April 5, 1861.

Commander J. P. GILLIS, commanding *U. S. Steamer Pocahontas, Norfolk, Va. :*

SIR,—You will proceed to sea with the Pocahontas, and on the morning of the 11th instant appear off Charleston bar, ten miles distant from and due east of the light-house, where you will report to Captain Samuel Mercer, of the Powhatan, for special service. Should he not be there, you will await his arrival.

I am, respectfully, your obedient servant,

GIDEON WELLES, *Secretary of the Navy.*

NAVY DEPARTMENT, April 5, 1861.

Commander S. C. ROWAN, commanding U. S. Steamer Pawnee, Norfolk, Va. :

SIR,—After the Pawnee shall have been provisioned at Norfolk, you will proceed with her to sea, and on the morning of the 11th instant appear off Charleston bar, ten miles distant from and due east of the light-house, where you will report to Captain Samuel Mercer, of the Powhatan, for special service. Should he not be there, you will await his arrival.

I am, respectfully, your obedient servant,

GIDEON WELLES, *Secretary of the Navy.*

NAVY DEPARTMENT, April 5, 1861.

Captain FAUNCE, Commander of U. S. Revenue Steamer Harriet Lane, N. Y. :

SIR,—The revenue steamer Harriet Lane having been temporarily placed under the orders of this Department, you will proceed with her from New York in time to appear off Charleston bar, ten miles distant from and due east of the light-house, on the morning of the 11th instant, where you will report to Captain Samuel Mercer, of the Powhatan, for special service. Should he not be there, you will await his arrival.

Very respectfully, your obedient servant,

GIDEON WELLES, *Secretary of the Navy.*

NAVY DEPARTMENT, April 5, 1861.

Captain JOHN FAUNCE, Commander of Steamer Harriet Lane :

SIR,—The Harriet Lane, under your command, having been detached from the collection district of New York, and assigned to duty under the Navy Department, you are hereby instructed to proceed to within ten miles due east from and off Charleston light-house, where you will report to Captain Mercer, of the Powhatan, for duty, on the morning of the 11th instant; and should he not be there, you will wait a reasonable time for his arrival.

I am, sir, very respectfully, your obedient servant,

GIDEON WELLES, *Secretary of the Navy.*

WASHINGTON, D. C., May 1, 1861.

Captain G. V. FOX :

MY DEAR SIR,—I sincerely regret that the failure of the late attempt to provision Fort Sumter should be the source of any annoyance to you. The practicability of your plan was not, in fact, brought to a test.

By reason of a gale well known in advance to be possible, and not improbable, the tugs, an essential part of the plan, never reached the

ground ; while, by an accident, for which you were in no wise responsible, and possibly *I*, to some extent, was, you were deprived of a war-vessel, with her men, which you deemed of great importance to the enterprise.

I most cheerfully and truly declare that the failure of the undertaking has not lowered you a particle, while the qualities you developed in the effort have greatly heightened you in my estimation.

For a daring and dangerous enterprise of a similar character, you would, to-day, be the man, of all my acquaintances, whom I would select. You and I both anticipated that the cause of the country would be advanced by making the attempt to provision Fort Sumter, even if it should fail; and it is no small consolation now to feel that our anticipation is justified by the result.

Very truly your friend,

A. LINCOLN.

These statements and facts place in the clearest light the injustice of the complaints made against the Government during the apparent inaction between the 4th of March and April, 1861. Any movement would have been rash then, before a deliberate survey of all the perils by which the new Administration was beset. Particularly do these facts show how ill-considered and ungenerous were the charges of inefficiency brought by some against the Navy Department and the spirited and skilful officer who conducted the enterprise, because Sumter was not relieved. The Secretary of the Navy acted with the utmost promptitude. The letter of the President directing the expedition to be got ready was dated March 28th, and before the first of April every vessel needed was being prepared, and every one was ready in season to reach the appointed rendezvous on the 11th of April, four days before the time up to which Major Anderson had informed the Government that he could hold the fort.

Certainly the Secretary of the Navy could not foresee that the most important ship of the little squadron, the one without which failure was inevitable, would be detached without any consultation with him, and sent contrary to his orders in another direction ; and to hold Captain Fox responsible for the failure after the vessel upon which he mainly relied, and which carried the three hundred sailors and the launches, had been sent to

Fort Pickens by a secret order, was such glaring injustice that President Lincoln would not suffer it to pass : but with the characteristic manliness of his nature, in a letter to Captain Fox, took the responsibility upon himself, through what he calls the "*accident*" of sending away the Powhatan. The expedition for the relief of Fort Pickens, for which the Powhatan, not only without orders from the Secretary of the Navy, but contrary to his orders, was secretly withdrawn from Captain Fox, proved to be a useless one, for the Navy Department and the Secretary of War had abundantly provided for its safety, and it was in fact reënforced before the Powhatan arrived.

Fort Sumter was not relieved, not because the President did not decide to do it, nor because there was any remissness in the Secretary of the Navy or any defect in the plan of Captain Fox, but because both orders and plan were secretly interfered with in a manner that could neither be foreseen nor avoided. President Lincoln was doubtless right in expressing to Captain Fox the following sentiment in the letter already quoted : " You and I both anticipated that the cause of the country would be advanced by making the attempt to provision Fort Sumter, even if it should fail, and it is no small consolation now to feel that our anticipation is justified by the result." In a very important sense the expedition was no failure, even though it did not reach the fort. It was the decision to do it, the moral courage and patriotism exhibited in the bold and perilous attempt which re-inspired the country. The spirit of the North was drooping, it had reached well nigh the point of fatal collapse ; and the noble determination that the country's honor should not be stained by a timid surrender, that our flag should not be lowered without one brave blow struck in its defence, this re-inspired the fainting heart of the people ; it imparted to them a fresh moral power that rendered them capable of that magnificent outburst of patriotism and holy wrath which followed the capture of the fort. It was one among the many severe trials which the Secretary endured in silence, that after every needed preparation had been promptly made to execute this most important order of the President ; when a trusted and skilful officer had volunteered to hazard both life and reputation, dearer than life ; when the Department had done its whole

duty, and failure was due alone to secret interference from without, that its whole action should be made the subject of reproach and sneers by those who might easily have known the facts. But time, the avenger of injured reputation as well as other wrongs, has fully vindicated both the Secretary and the officer who commanded the expedition.

CHAPTER XVI.

AMERICAN ORDNANCE.

THE facts already stated present but one part of that comprehensive plan devised and executed by the Navy Department, by which, in the short space of four years, and under the pressure of a great war, the United States was raised to a first-class naval power, and a force created which more effectually than our armies shielded us from foreign intervention. Our soldiers were a perfect protection on the land—an equally powerful one was needed on the sea.

The other part of the general plan was to increase the power of our guns. The fitting out of ships purchased, the construction of new ones, in short, every step in the creation of the Navy had more or less reference to changes already made or contemplated in the character of our naval ordnance. The idea of the heavy, smashing shot, instead of the smaller, swifter one, has, from the beginning of our national career, been a controlling one in the American mind.

Although referred to more than once already, it is necessary to present it once more in this discussion of the character and efficiency of the heavy American guns which were first used during the rebellion, and which have already greatly modified both the theories and the practice of all naval powers. It is not supposed by any that the perfect gun has as yet been reached. The whole question in regard to ordnance is yet in an unsettled state. No scientific professional man would undertake to say what may be done or what cannot be done. Results already reached are in such startling contradiction to most previous theories and expectations, that the boldest are disposed to wait for additional facts before forming a decided opinion.

England and France are very unwilling to admit that the American experiments have shown that their science, skill, and experience are all at fault. They are naturally enough quite slow to believe that a young nation which through all its life had made peace and not war a study, has, in a sudden emergency, discovered a principle in gunnery which proves all their wisdom to be folly in comparison. It will be only by the strong compulsion of facts that they will be convinced that they must abandon the present armament for their ships, and adopt the plans of a nation which they have held as so far inferior to themselves in all the arts of war. Nor is it surprising that there are many here, as well as in Europe, who are not yet prepared to think that American thought in regard to guns is so far in advance of the rest of the world. The ordnance problem then is by no means considered to be solved, but England and France were probably ready to admit, at the close of our war, that it would be wise to pause and reconsider their theories; while here and in Russia, to say the least, the facts are believed to be very decidedly, if not conclusively, in favor of the large gun and the smashing shot. The Navy Department has adopted and acted upon this idea, and its success has more than justified its early expectations; and the opposition and ridicule with which the new guns were met at first has been silenced by the results. The introduction of larger cannon for our ships was not only a part of the plan, but it was an essential part, and especially when iron-clad vessels were to be attacked. A single illustration, which will be brought forward hereafter, may be glanced at here. In the action between the Monitor and Merrimack the two vessels fought for four hours at short range, sometimes at a distance of only a few yards, and yet neither was sunk, captured, nor essentially injured. Yet they used the most powerful guns then known, except in theory, to England or America. It was evident then that different cannon were needed, and how this thought was worked out will be explained hereafter.

In order that the reader may understand the progress which has been made in American gunnery, and the direction that the American mind has taken in this department of war, it is necessary to dwell more at length upon a subject already

touched upon in a previous chapter, the batteries of French and English ships. No proper comparison can be made between the guns in use on American ships at the close of the war and the previous armaments of war-vessels, without going back as far at least as Lord Nelson's time, and showing the character of the batteries of those world-renowned ships with which England made herself the mistress of the seas; while the progress in English gunnery must also be noted, from a time still more remote. The following statements, collected from English authorities, will show the main changes which have been made in naval guns for more than two hundred years:

The first frigate built in England, according to Mr. James, was the *Constant Warwick*, constructed in 1646. She was a ship of about 400 tons' burden and mounted 26 guns. Eighteen of these were short 9-pounders, six were short 6-pounders, and two minions on the roof of the officers' cabin. Such a *frigate* would not be considered a very formidable adversary for any thing which now we would dignify with the name of vessel-of-war.

In 1740 two new classes were added to the British Navy, one a 44-gun ship of about 700 tons. The heaviest guns of this class were 18-pounders, the lighter were 9-pounders and 6-pounders. The other class was a 24-gun ship, of about 450 tons, armed mainly with 9-pounders. Up to 1779 it appears that the 18-pounder was the largest gun in use either in the English or French Navies. In one hundred and thirty-three years from the building of the *Constant Warwick*, England had advanced from a 9-pounder to an 18-pounder gun for the armament of her largest vessels. In 1779 the gun now called a carronade was cast for the first time at the works of the Carron Company, on the banks of the river Carron, in Scotland—a short, light gun with a large calibre in proportion to other cannon. One of those first cast was an 8-inch gun, and the shot weighed about 68 pounds. In December, 1781, it was recommended that 68-pounder carronades should be used on the forecastle of large ships, and 42-pounders and 32-pounders on the same deck of smaller rates. In 1793 we find the following statement of the batteries of a French and an English frigate, the *Semillante* and the *Venus*, that fought with no decisive result:

VENUS.	SEMILLONTE.
24 long 12-pounders	26 long 12-pounders.
8 long 6-pounders	10 long 6-pounders.
6 carronades, 18-pounders	4 carronades, 36-pounders.
38	40

Lord Howe's squadron, in 1794, was armed with 32-pounders, 24-pounders, 18-pounders, 12-pounders, and 9-pounders, and in the whole fleet were only two 68-pounder carronades. These statements are sufficient to show the character of the guns used in the French and English Navies down to the time of Lord Nelson.

The carronade, after having been received for a time with great favor, gradually fell into disuse as science was more and more applied to the art of gunnery, and it disappeared from the service both in England, France, and America upon the introduction of shell-guns. Two ideas were connected with the first use of shell-guns—one, the firing of hollow shot of larger calibre than a solid shot of the same weight, on the supposition that the smashing power would be greater; and the other was, to employ a shell with a bursting charge. Through a long course of experiments, both in England and America, conclusions were reached unfavorable to the use of hollow shot, and shell-guns were more and more restricted to their appropriate use, with shells designed to explode. The changes which were made in the guns of Europe between the close of the wars with Bonaparte and 1860, will appear from the following tables quoted from Sir Howard Douglas's work on "Naval Gunnery." These, of course, will exhibit the armaments of European navies in general at the commencement of the rebellion, and in this light the position of the American mind upon the subject of naval guns will clearly appear, as will also the distinction between the American and European theories. In studying these tables the reader will perceive that two kinds of 8-inch guns are mentioned, one weighing 65 cwt., and 9 feet long, and the other weighing 95 cwt., and 10 feet long. The lighter and shorter gun is a shell-gun, and the larger for firing solid 68-pound shot; and up to the time of the commencement of our rebellion, to say the least, it was considered by the English to be the most powerful and reliable gun in the world.

ARMAMENT OF THE BRITISH NAVY.

SCREW STEAM SHIPS.

First Rates—"Victoria" Class, 1,000 horse-power.

Lower Deck.....	32 8-inch guns, 65 cwt., 9 feet.
Middle Deck.....	30 8-inch guns, 65 cwt., 9 feet.
Main Deck.....	32 32-pounders, 58 or 56 cwt., 9 feet 6 inches.
Upper Deck.....	{ 26 32-pounders, 42 cwt., 8 feet.
	{ 1 68-pounder pivot, 95 cwt., 10 feet.
	121 guns. Total complement, 1,150 men.

First Rates—"Duke of Wellington" Class, 700 horse-power.

Lower Deck.....	{ 10 8-inch guns, 65 cwt., 9 feet.
	{ 26 32-pounders, 58 or 56 cwt., 9 feet 6 inches.
Middle Deck.....	{ 6 8-inch guns, 65 cwt., 9 feet.
	{ 30 32-pounders, 58 or 56 cwt., 9 feet 6 inches.
Main Deck.....	38 32-pounders, 42 cwt., 8 feet.
Upper Deck.....	{ 20 32-pounders, 25 cwt., 6 feet.
	{ 1 68-pounder pivot, 95 cwt., 10 feet.
	131 guns. Total complement, 1,120 men

First Rates—"Royal Albert" Class, 500 horse-power.

Lower Deck.....	32 8-inch guns, 65 cwt., 9 feet.
Middle Deck.....	32 32-pounders, 58 or 56 cwt., 9 feet 6 inches.
Main Deck.....	32 32-pounders, 42 cwt., 8 feet.
Upper Deck.....	{ 24 32-pounders, 42 cwt., 8 feet.
	{ 1 68-pounder pivot, 95 cwt., 10 feet.
	121 guns. Total complement, 1,070 men.

Second Rates—"Conqueror" Class, 800 horse-power.

Lower Deck.....	36 8-inch guns, 65 cwt., 9 feet.
Main Deck.....	36 32-pounders, 58 or 56 cwt., 9 feet 6 inches.
Upper Deck.....	{ 28 32-pounders, 42 cwt., 8 feet.
	{ 1 68-pounder pivot, 95 cwt., 10 feet.
	101 guns. Total complement, 950 men.

Third Rates—"Colossus" Class, 200 horse-power.

Lower Deck ...	{ 10 8-inch guns, 65 cwt., 9 feet.
	{ 18 32-pounders, 58 or 56 cwt., 9 feet 6 inches.
Main Deck.....	{ 4 8-inch guns, 65 cwt., 9 feet.
	{ 24 32-pounders, 50 cwt., 9 feet.
Upper Deck.....	24 32-pounders, 42 cwt., 8 feet.
	80 guns. Total complement, 770 men.

SCREW STEAM FRIGATES.

Fourth Rates—"Emerald" Class, 600 horse-power.

Main Deck	30	8-inch guns, 65 cwt., 9 feet.
Upper Deck	{	20 32-pounders, 58 or 56 cwt., 9 feet 6 inches.
		1 68-pounder pivot, 95 cwt., 10 feet.
		51 guns. Total complement, 570 men.

Fifth Rates—"Tribune" Class, 300 horse-power.

Main Deck.....	20	32-pounders, 56 cwt., 9 feet 6 inches.
Upper Deck.....	{	10 32-pounders, 42 cwt., 8 feet.
		1 10-inch pivot, 84 cwt., 9 feet 4 inches.
		31 guns. Total complement, 350 men.

SCREW STEAM CORVETTES.

Sixth Rates—"Pearl" Class, 400 horse-power.

Upper Deck	{	20 8-inch guns, 60 cwt., 8 feet, 10 inches.
		1 68-pounder pivot, 95 cwt., 10 feet.
		21 guns. Total complement, 350 men.

MORTAR FRIGATES.

Sixth Rates—"Eurotas" Class, 200 horse-power.

Main Deck	{	2 13-inch mortars, 100 cwt.
		8 32-pounders, 42 cwt., 8 feet.
Upper Deck		2 68-pounder pivot, 95 cwt., 10 feet.
		12 guns. Total complement, 200 men.

FLOATING BATTERIES.

Sixth Rates—"Ætna" Class, 200 horse-power.

Main Deck	16	68-pounders, 95 cwt., 10 feet.
		16 guns. Total complement, 210 men.

SCREW STEAM SLOOPS.

"Chameleon" Class, 200 horse-power.

Main Deck.....	{	16 32-pounders, 32 cwt., 6 feet 6 inches (on rear chock carriages).
		1 32-pounder pivot, 58 cwt., 9 feet 6 inches.
		17 guns. Total complement, 70 men.

SCREW STEAM GUN-VESSELS.

"Arrow" Class, 160 horse-power.

Main Deck, ...	{	2 68-pounder pivots, 95 cwt., 10 feet.
		2 12-pounder howitzers, 10 cwt.

4 guns. Total complement, 65 men.

SCREW STEAM GUNBOATS—FIRST CLASS.

"Charon" Class, 60 horse-power.

Main Deck, ...	{	1 68-pounder pivot, 95 cwt., 10 feet.
		1 32-pounder pivot, 56 cwt., 9 feet 6 inches, on slides available for the 95-cwt. gun.

2 guns. Total complement, 36 men.

"Cheerful" Class, 20 horse-power.

Main Deck, ...	2 32-pounder pivots, 56 cwt., 9 feet 6 inches.
------------------	--

2 guns. Total complement, 30 men.

SCREW STEAM-VESSELS.

"Rifleman" Class, 100 horse-power.

Main Deck, ...	{	2 32-pounders, 56 cwt., 9 feet 6 inches.
		6 32-pounders, 25 cwt., 6 feet.

8 guns. Total complement, 90 men.

SAILING SHIPS.

First Rates—"Caledonia" Class.

Lower Deck, ...	{	8 8-inch guns, 65 cwt., 9 feet.
		24 32-pounders, 56 cwt., 9 feet 6 inches.
Middle Deck, ...	{	4 8-inch guns, 65 cwt., 9 feet.
		30 32-pounders, 50 cwt., 9 feet.
Main Deck, ...	{	34 32-pounders, 42 cwt., 8 feet.
Quarter Deck and Forecastle, ...	{	6 32-pounders, 42 cwt., 8 feet.
		14 32-pounder carronades, 17 cwt., 4 feet.

120 guns. Total complement, 970 men.

Second Rates—"Princess Charlotte" Class.

Lower Deck	{	4 8-inch guns, 65 cwt., 9 feet.
		24 32-pounders, 56 cwt., 9 feet 6 inches.
Middle Deck	{	2 8-inch guns, 65 cwt., 9 feet.
		28 32-pounders, 48 cwt., 8 feet.
Main Deck	{	30 32-pounders, rear chock carriage, 32 cwt., 6 feet
		6 inches.
Quarter Deck and Forecastle.	{	6 32-pounders, 45 cwt., 8 feet 6 inches.
		10 32-pounder carronades, 17 cwt., 4 feet.
		104 guns. Total complement, 860 men.

Third Rates—"Bellerophon" Class.

Lower Deck	{	4 8-inch guns, 65 cwt., 9 feet.
		22 32-pounders, 56 cwt., 9 feet, 6 inches.
Main Deck	{	2 8-inch guns, 65 cwt., 9 feet.
		26 32-pounders, 50 cwt., 9 feet.
Quarter Deck and Forecastle.		16 32-pounders, 42 cwt., 8 feet.
		70 guns. Total complement, 650 men.

Fourth Rates—"Indefatigable" Class.

Main Deck	28 8-inch guns, 65 cwt., 3 feet.
Quarter Deck and Forecastle.	22 32-pounders, 45 cwt., 8 feet 6 inches.
	50 guns. Total complement, 500 men.

Fifth Rates—"Pique" Class.

Main Deck	{	6 8-inch guns, 60 cwt., 8 feet 10 inches.
		18 32-pounders, 56 cwt., 9 feet 6 inches.
Quarter Deck and Forecastle.	{	14 32-pounders, 25 cwt., 6 feet.
		2 32-pounders, 50 cwt., 9 feet.
		40 guns. Total complement, 375 men.

Sixth Rates—"Trincomalee" Class.

Main Deck	{	8 32-pounders, 56 cwt., 9 feet 6 inches.
		10 8-inch guns, 65 cwt., 9 feet.
Quarter Deck and Forecastle.	{	6 32-pounders, 40 cwt., 7 feet 6 inches.
		1 10-inch gun, 84 cwt., 9 feet 4 inches.
		25 guns. Total complement, 275 men.

SLOOPES.

"Arachne" Class.

2 32-pounders, 39 cwt., 7 feet 6 inches.
16 32-pounders, 25 cwt., 6 feet.
18 guns. Total complement, 145 men.

PADDLE STEAM-FRIGATES.

Fifth Rates—"Terrible" Class, 800 horse-power.

Main Deck	{	10 8-inch guns, 65 cwt., 9 feet.
		4 68-pounders, 95 cwt., 10 feet.
Upper Deck	{	4 10-inch guns, 84 cwt., 9 feet 4 inches.
		3 68-pounder pivots, 95 cwt., 10 feet.
		21 guns. Total complement, 310 men.

Sixth Rates—"Furious" Class, 400 horse-power.

Main Deck		10 32-pounders, 50 cwt., 9 feet.
Upper Deck	{	2 10-inch pivots, 84 cwt., 9 feet 4 inches.
		4 32-pounders, 50 cwt., 9 feet.
		16 guns. Total complement, 230 men.

PADDLE STEAM-SLOOPS.

"Bulldog" Class, 500 horse-power.

Upper Deck	{	1 68-pounder pivot, 95 cwt., 10 feet.
		1 10-inch pivot, 94 cwt., 9 feet 4 inches.
		4 32-pounders, 80 cwt., 8 feet.
		6 guns. Total complement, 170 men.

PADDLE STEAM-VESSELS.

"Medina" Class, 312 horse-power.

Upper Deck		4 32-pounders, 50 cwt., 9 feet.
		4 guns. Total complement, 65 men.

These tables and statements present a general view of the batteries of the English Navy from the building of the first frigate down to the time of the beginning of the rebellion. They do not exhibit the exact armament of every ship, nor do they notice the experimental guns which were continually brought to the notice of the British Government, but they show what was deemed sufficiently trustworthy to enter into the permanent armament of these ships. It is seen that at the time when Sir Howard Douglas published his work (1860), the 8-inch shell-gun was the main reliance, while the 8-inch 68-pounder for solid shot was considered the heaviest and most powerful gun that could be safely used even as a pivot-gun on board a

ship. It was not thought that such guns could be carried in broadside. Up to that date the English and French adhered to the idea of long range and penetration, rather than the smashing power and lower velocity of the larger shot. The latter idea was entertained for a short time when the carronade was first introduced, but it was gradually abandoned when it was found that a ship was liable to be disabled by the long guns of an adversary before the shot from a carronade would reach her, and it remained for the Americans to increase the calibre of the gun without diminishing its range.

Leaving the English Navy at the point reached in 1860 with the 8-inch shell-gun for the broadside, and the 68-pounder 8-inch gun as a pivot-gun, the reader will be ready to compare with this the progress of the American idea. Going back to the true starting-point of the American Navy, just before the War of 1812, we find a point of comparison between British and American batteries in the following note in Admiral Dahlgren's "Shells and Shell-Guns:—"

"It may be noted here that, as a means of comparison with ships of a past date, that the *Britannia*, three-decker, on being laid up in 1806, after the battle of Trafalgar, in which she bore a part, returned 102 guns to store at Davenport; showing a broadside weight of metal equal to 1,160 pounds.*" Referring once more to what was stated in a previous chapter, it will be seen that the weight of metal thrown at a broadside by one of the new American frigates of that period was 864 pounds, while she mounted only fifty-four guns. Considering the greater weight of the frigate's shot, and the longer range of her guns, it may be safely presumed that, under favorable circumstances, she would have been an equal match for this English three-decker, the pride of the British Navy.

The victories won by the Americans in the War of 1812, which so astonished the world, and humbled the pride of England, and dealt a blow to her naval supremacy, from which she will never recover, were due in great degree to the manner in which the national idea of heavy guns had been carried out in the armament of our ships, especially our frigates.

While the main batteries of the English 44-gun ship con-

* Official Report to Committee of Parliament.

sisted of long 18-pounders, our frigates of the same rate carried long 24-pounders; and where the British ship mounted 32-pounder carronades, ours in many instances were armed with 42-pounder guns of this description, so that there was an important preponderance in our favor in the weight of the broadside, and this told with such fearful effect upon the more lightly armed adversary, that only one of the three frigates captured by us could be brought into port.

It is indeed true that this was not entirely due to the superiority of our guns, and the greater weight of our shot. Our gunners were undoubtedly superior to the English in the rapidity and accuracy of their fire, and hence the deadly effect of their broadside. Misrepresentation, spiteful abuse of the American people, improper, personal attacks upon our officers, and downright inaccuracy, were all persistently employed to break the force of the blow thus given to British pride and boastfulness, but it was all in vain. Even James's labored effort, which is beneath the name of history so far as America is concerned, and which can scarcely be said to be founded on fact, could not conceal the real state of the case. Through the thick veil of his misrepresentations the main truths still appear. The British were met with better ships, a more powerful armament, with better gunners and more skillful seamen than their own, and therefore they were beaten; and the fate of the Alabama, that English pet, under the fire of the Kearsarge, is prophetic of results when next these two nations meet.

After the close of the War of 1812, our new line-of-battle ships, such as the Ohio, were armed with still larger guns. They carried long 42-pounders on the main deck, and were as much superior to the English vessels of the same class as our frigates of 1812 had been. The results of experiments, which were continually made under the direction of Government, tended constantly to the adoption of heavier ordnance. The gun called the columbiad was introduced, and then the gun which bears the name of the distinguished inventor, Dahlgren, who has contributed so largely to give to American ordnance its present superiority. The experiments made under the direction of Admiral Dahlgren were so decisive that the six new frigates fitted out in 1856 were armed with much heavier guns

than had been before used on board a ship as composing a regular battery. They were 9-inch, 10-inch, and 11-inch shell-guns.

The following comparison between one of these frigates, the Merrimack, since become so famous, and two of the finest English frigates of that date, will show the reader the character of the armaments of the two nations at the beginning of the rebellion, by which it will also appear that the American frigates still retained their former superiority in guns and weight both of the single shot and the broadside. The statement is copied from Admiral Dahlgren's "Shells and Shell-Guns," published in 1856:

The remarks that have been made in relation to the comparative force of the United States ship Merrimack, and the British ships Shannon and Euryalus, induce me to offer a few words on the subject:

The batteries of these ships may be stated thus from the best sources that are accessible to us:

GUN-DECK.	SPAR-DECK.
Euryalus, 28 of 8-inch, of 65 cwt.	22 32-pdrs., of 45 cwt.
Shannon, 30 of 8-inch, of 65 cwt.	20 32-pdrs, of 56 cwt., and 1 68 pdr., of 95 cwt.
Merrimack, 24 of 9-inch.	14 8-inch, of 63 cwt., and 2 10-inch, of 107 cwt.

Taking the main weight of iron that goes out of the guns to any one point, the ships will discharge—Euryalus, 1,066 pounds; Shannon, 1,167 pounds; Merrimack, 1,424 pounds; so that even by this standard, the Merrimack would have the superiority in offensive capacity by a ratio of 100 to 82.

But such a mode of estimating the power of ordnance is only admissible when the description of gun is the same in both ships, or if different, when the distances are so short that the hastiest shot will neither miss the mark nor fail to perforate. When, as now, it is expected to use the advantages of heavy calibres for superior accuracy and force beyond mere point blanks, the amount of metal that issues from the broadside does not supply the criterion of power, *but that which strikes the object and with due force.*

Relative accuracy and penetration are, therefore, to be considered in estimating the value of ships' batteries like those now spoken of. There is no difficulty in deciding between the Shannon and the Euryalus, because both have similar calibres, 8-inch on the gun-deck and 32-pounds above. But the Shannon has more of the 8-inch shell-guns and heavier 32-pounders than the Euryalus, and hence has unquestionably the more powerful armament, whether far or near, in a ratio somewhat greater

than the absolute weight of broadside. Besides which, she has a 68-pounder on the forecastle.

Now, as regards the Shannon and Merrimack, the 772 pounds of 8-inch shells from the gun-deck of the former are inferior, not only in mere weight to the 864 pounds of 9-inch from the gun-deck of the latter, but also in accuracy and power, so that a distant object will be struck by less of that weight and with less force. The accuracy of the 8-inch to 9-inch being about as 5 to 7, the penetration as 9 to 10, and the content of powder as 5 to 6, with the further advantage to the 9-inch of greater effect by reason of the superior content of the individual shells—larger orifice and greater shock of impact.

Then, on the spar-deck, we have for the Merrimack 360 pounds of 8-inch shells to oppose the 325 pounds of shot from the Shannon; the accuracy of the 8-inch shells to the 32-pounder shot being as 5 to 3—the shock and orifice greater, with the addition of the explosive force of 14 pounds of powder.

The Merrimack has also 2 pivot 10-inch to meet the one 68-pounder; that is, 200 pounds in heavy shells to meet the one 68-pounder shot, or one 8-inch shell.

It is of course impossible, nor is it necessary, to deduce the exact value of the combined results, but we think that a glance at the facts will convince that the Merrimack, not only has the advantage in absolute weight of projectile, *supposing all strike*, but that the greater accuracy and power beyond point blank will increase this difference very much in favor of the Merrimack.

The United States ship has also the capacity to bear more battery than now carried. Her tonnage is one-fifth greater than that of the Shannon, and according to the ratio of armament to burden in the latter ship (1 : 16 $\frac{1}{4}$), the Merrimack should (other things being equal) bear with equal ease about 196 tons of ordnance, while in reality she only carries 153 tons, which is absolutely 7 tons less than the weight of the Shannon's guns. The addition would give 10 more 9-inch guns, for which the Merrimack has at this time unoccupied ports on the gun-deck, and would raise the power of the Merrimack's broadside to 1,780 pounds—placing it, not only overpoweringly above that of the Shannon, but also on an equality with the broadside of the heaviest two-decker line-of-battle ship in the British or any other navy.

It appears by this that the ordinary battery of the Merrimack bore nearly the same ratio of superiority to that of the Shannon that the armament of the Constitution did to that of

the *Guerriere*, while the full battery of the American frigate was, at the beginning of the rebellion, overwhelmingly superior to the first-class British frigates as they were then armed. These facts and statements exhibit the comparative state of English and American ordnance at about the period when our war of the rebellion began. Our vessels were then using, as their heaviest guns, the 10-inch Dahlgren, a shell-gun, and 9-inch, 10-inch, and 11-inch shell-guns of the same pattern. This last-named gun varies from the columbiad mainly in its shape, which is more nearly in conformity with scientific principles, and experience has shown it to be more reliable and stronger than the columbiad. Soon after the commencement of the war, two new guns were introduced into the service, one bearing the name of its inventor, Parrott, a rifled gun, and the other a smooth-bore, called also after its inventor, the Rodman gun. The Parrott gun consists of a solid casting, which is bored out and rifled, and then strengthened by a band of wrought iron around the breech, which band is shrunk on. These guns are very highly esteemed both for land service and the Navy, and the inventor has succeeded in producing a 300-pounder rifle of this pattern, which was found very serviceable at Charleston.

The peculiar character of the Rodman gun consists in the method by which it is cast. This method is thus described by Commander Henry A. Wise, United States Navy, and chief of the Ordnance Bureau, in his testimony before the Committee on the Conduct of the War (1865): "The Rodman gun, as it is termed, is cast upon a peculiar principle. There is a core of iron in the centre of the mould, and a stream of water is introduced from a hydrant into that core. The metal is poured into the mould around that core, and it is cooled interiorly and exteriorly at the same time. It is assumed that very great strength is obtained for the gun so cast. The water is introduced at the bore of the core, and the head of water from the hydrant causes it to rise in the core to the top, whence it is carried off by a pipe. This process goes on during the process of pouring in and cooling the metal. The guns made by that method are much stronger than if made by the method of solid casting. The casting in a cylindrical form is generally supposed to give more uniform strength.

This method has gained ground only within the last three years. One 15-inch smooth-bore gun and one 12-inch rifle had been cast on the Rodman plan before the beginning of the rebellion, but no use had been made of them beyond a partial test, and they lay dismounted and forgotten at Fortress Monroe. The terrible accident occasioned by the bursting of a wrought-iron gun on board of one of our steamships had brought big guns into discredit, and the Rodman experimental guns were cast aside as so much useless rubbish. These two large guns, lying thus neglected in the sand at Fortress Monroe, were brought into notice again by one of those apparently trivial things on which great events so often depend, one of the so-called chance occurrences which the Christian regards as taking place under the direction of Him who notices the sparrow's fall. The Assistant Secretary of the Navy, Captain Fox, and the head of the Ordnance Bureau, Captain Wise, were at Fortress Monroe at the time of the fight between the Monitor and the Merrimack, and in a small tug were near spectators of that now famous battle. As the reputation of the Department, as well as the country's safety, depended very much upon the success of the novel ship, the contest was watched with intense anxiety as well as interest. For four hours these two vessels used against each other, at short range, the most powerful artillery then adopted by England and America; and at its close, though the Merrimack was compelled to withdraw, partially disabled, yet the armor had not been penetrated. On both sides the armor had been victorious over the guns. The Assistant Secretary, in describing his own reflections, while yet upon the spot, said: "The first thing to suggest itself was the necessity of larger guns." It seemed to be demonstrated that, while the Merrimack had inflicted no important injury upon the Monitor, neither had the rebel frigate received a fatal blow from the 11-inch guns. To insure the destruction of such a ship, it was necessary to have guns of greater *smashing* power.

While these thoughts were in his mind, the party landed at Fortress Monroe, at the very spot where the neglected and forgotten Rodman guns were lying. They at once attracted his attention, and the question arose, Why is not this 15-inch gun the very thing we want? The question led to inquiries, and

these to the adoption of such measures as secured a trial of this formidable weapon. Upon a fact which seemed at the moment to have no importance, the issue of the national conflict was, as we now see, depending; for success, to say the least, would have been very doubtful, if not impossible, without the Monitors and the 15-inch guns, which alone gave them sufficient offensive power.

The 15-inch gun was destined to meet with nearly the same opposition as the Monitor itself. Those who had won a reputation in the Department of Ordnance were naturally unwilling to risk it upon an untried experiment, and when experience seemed not to promise success. The necessity was urgent, and would not admit of such experimental test of the gun as would demonstrate both its safety and efficiency. Admiral Dahlgren, whose opinions were entitled to great weight, and who was the directing head of the Ordnance Department, was willing to proceed to manufacture such a gun under directions from the Department, and prepared the plan, but expressed doubts of its success, and preferred a 13-inch gun, believing that it would bear a larger charge of powder, that the shot driven with greater force would be more effective; and thus the Secretary was constrained to adopt the new gun without the express sanction of those to whom he would most naturally go for an opinion. As in the case of the Monitors, the newspapers were drawn into discussion of the question, and many articles appeared condemning the guns and censuring the Naval Ordnance Bureau for introducing them into the service. In order to relieve that bureau from charges to which it was not amenable, and to assume his own proper share of responsibility, the Assistant Secretary addressed the following note to *The New York Times*:

NAVY DEPARTMENT, *Thursday, May 28, 1862.*

Several days since an article appeared in your paper (and similar articles have appeared in other papers), censuring the Naval Ordnance Bureau for introducing the 15-inch calibre into the Navy. I cannot say what influenced the Secretary of the Navy to adopt this heavy calibre, but I know that the distinguished chief of the Bureau of Ordnance, Rear-Admiral Dahlgren, did not advise it. Whatever responsibility attaches to those who strenuously urged it belongs to me and not to the admiral.

Very respectfully,

G. V. Fox, *Assistant Secretary.*

The following letter from Captain Ericsson will help the public to determine to whom belongs the responsibility, and as is now seen the honor of bringing into the service the 15-inch guns:

NEW YORK, April 20, 1864.

To Hon. G. V. Fox, Assistant Secretary of the Navy:

SIR: I enclose copy of the plan of a twenty-foot diameter turret, with two 15-inch guns, which I forwarded to you on the 22d March, 1862. With reference to these guns I have to state that the calibre was determined by yourself, and that the outline and proportions were made to correspond as nearly as possible with the 11-inch Dahlgren gun.

I am, sir, respectfully, your obedient servant,

J. ERICSSON.

The 15-inch gun was a Rodman gun, so far as the method of casting was concerned; externally it was shaped after the Dahlgren pattern, and it therefore combined the excellences of the plan of both these distinguished inventors, while the calibre of the gun, and the weight of the shot, the essential points, were determined by the Department, and by the advice of the Assistant Secretary. The first trial of the new ordnance against an armored vessel, the *Atlanta*, ended all doubt in the minds of all candid persons in regard to its efficiency; and in Europe, even more quickly than at home, it was conceded that the American guns had introduced a new era in naval war—a concession not made so much in words as in the experiments for the manufacture of heavier ordnance for their own ships.

From these statements it will be seen that from the time of the building of our first frigates, after the War of the Revolution to the close of the War of the Rebellion, the Americans steadily maintained a superiority in the weight of the battery and of the single shot, and that these have been the main causes by which success and renown have been won. True, they are not the only causes. In general, the scantling of our ships has been larger than that of other nations, and therefore they were not so easily cut up by shot; and, in addition, our vessels have been handled with more skill, our firing has been more rapid, and the aim of our gunners more accurate. All these points were made clear in the fight with the *Alabama*. The Ameri-

can ship was more stoutly built than the English ship, she was managed with superior skill, her heavy shells tore the Alabama in pieces, and converted her deck into a slaughter-house, while the greater accuracy of the aim of the Americans was apparent to all who saw the battle; and yet the Alabama's guns were served by picked gunners trained on the practice-ship of the British Navy. It was probably the most conclusive answer yet given to the false and foolish statement so persistently made in England, that our naval victories have been won by English seamen. Still, with all other advantages, it would be unreasonable to suppose that the same results would have been reached in all cases in the War of 1812 had our ships mounted no heavier batteries than those of the English frigates; and it is quite clear that the Alabama was demolished by our 11-inch shells, and equally so that the Atlanta would not have been captured, as she was, except by the 15-inch guns. Other nations will doubtless manufacture guns equal to those we now have, but we may safely trust for the future to that inventive genius and thinking power which have given us our past triumphs and our present superiority.

The country will not be prepared to give proper credit to the Navy Department, and especially to the energy of the Chief of the Ordnance Bureau, unless it understands how deficient the country was in guns, as well as in ships, at the commencement of the rebellion.

That scientific and accomplished officer, Admiral Dahlgren, had rendered a great service to his country, and had attracted the attention of Europe by his investigations and experiments in gunnery previous to the beginning of the war. He wrought out the American idea, and produced an American gun. His influence upon our ordnance will be more fully set forth in a future chapter. The gun which bears his name is justly admired as a truly scientific weapon, more reliable than any so-called "built-up" guns yet produced. Even the 15-inch guns were shaped after the Dahlgren pattern; and yet, at the breaking out of the rebellion, but few of these excellent guns of large calibre had been manufactured. Most readers will be surprised to learn how few efficient cannon the Government had at command when the rebels attacked Fort Sumter. A few facts will

present the actual state of things, and show the great difficulties against which the Ordnance Department had to contend in the first year of the conflict. There were on hand in March, 1861, 2,468 heavy guns. Of this number 1,872 pieces were 32-pounders, of an obsolete pattern, and 557 of the remainder were light 8-inch shell-guns, also of the old pattern. There were 305 9-inch Dahlgren guns, and 32 11-inch guns, of the same pattern. But many of these 9-inch and 11-inch pieces were at the Norfolk Navy-Yard, and were seized by the rebels, while most of the remainder were on board of our cruisers, which the Secretary of the Navy (Toucey) had scattered in distant seas, so that actually the Navy Department had at its disposal little more than fifty really efficient guns when the great battle began. The condition of our ordnance then may be also inferred from the fact that only two classes of guns then on hand—the 9-inch and the 11-inch Dahlgren—were the only pieces which were duplicated after the beginning of the war. It is seen, then, that the Department was called upon to create not only its ships, but their armaments also. “Not a gun belonging to the Navy was to be found upon the Mississippi or its tributaries,” where, before the close of the war, were a hundred steamers armed with the new American guns.

The difficulties were increased by the desertion of many, who, by their knowledge and long experience, were well fitted to conduct the affairs of the Ordnance Bureau, and this laid a double burden upon Commander H. A. Wise, the new chief of this department of the Navy, whose efficiency has been abundantly proved by the whole history of the struggle.

The efficiency of this bureau, and the immense resources of our country, are very forcibly exhibited by the fact that, in November, 1863, it had procured 2,811 guns, of the most approved modern patterns, about eight hundred of which were 9-inch and 11-inch Dahlgrens; about seven hundred were heavy rifles, and thirty-six 15-inch guns had already been finished.

The extensive Tredegar works in Richmond were from the first in the hands of the rebels, and, with the exception of the works at Pittsburg, few foundries in the country were at all prepared for the making of cannon; and from these facts may be seen, not only the difficulties which beset the Govern-

ment, but the astonishing facility and skill of our countrymen in changing so suddenly these workshops of peace into factories that produced the most formidable weapons of modern war with a rapidity equal to the enormous demand, and of a quality that stood the ordeal of battle.

The Chief of the Bureau of Ordnance pays the following well-merited tribute to the manufacturers who came so promptly to the aid of the Government :

In the report which I have now the honor to present, I shall endeavor to show briefly, yet as clearly as possible, how much this branch of the public service was unprepared for the great crisis of 1861, and in what manner and to what extent the existing difficulties have been overcome, and our ordnance of the Navy increased in numbers and improved in character. In doing so I shall not fail to give full credit to those of our citizens who have so ably and unhesitatingly assisted the bureau in all its efforts to meet the urgent necessities of the country, and who still continue to answer promptly and well the heavy requisitions made upon them. For, although the very best energies of the officers on ordnance duty everywhere, and the zealous coöperation of its employes at the several navy-yards have always been exerted to the utmost in carrying out the bureau's instructions, the great results which are shown by the records could never have been obtained without the assistance and support derived from the manufacturers, founders, and mechanics of the private establishments throughout the loyal States.

Thus it is a matter of no little importance, especially in view of future contingencies, to know that, independent of the resources immediately within the control of the Government, the Navy can safely rely upon the patriotism, zeal, and ability of the loyal citizens of our country at all times and under all emergencies.

Not only has this been the case among the people of our great cities on the Atlantic border, but whenever and wherever a demand was made for ordnance supplies of a kind which could not be conveniently and promptly furnished from the ordinary depots at the East and North, the manufacturers of the interior and the West have been found ready and competent to do the work in the most efficient manner.

These facts are most clearly demonstrated by the history of all the operations of our Navy since the outbreak of the rebellion. Not a single ship or squadron has ever been delayed in its movements for the want of ordnance or ordnance supplies.

The only establishments in the country which were prepared for the

work of founding heavy cannon when the rebellion took place were the South Boston, Fort Pitt, and the West Point founderies; the Tredegar Works, at Richmond, Va., having passed into the hands of the rebels. No government establishment of the kind existed, and consequently the sole reliance of both Army and Navy at the commencement of our difficulties was upon these three founderies. Right nobly, however, did they come to the rescue in the hour of need, and thus afforded time for the bureau to seek other manufacturers who might be willing to undertake the work of supplying the Navy with cannon. Although such operations are always attended with great risk to those who are unaccustomed to the casting of heavy guns, it was not long before several other establishments were ready to coöperate, and the work of producing the guns of various calibres required was commenced, and, I am happy to say, has been most successfully prosecuted. In addition to the above-named founderies, the bureau has now, as sources of supply, the establishment at Providence, Rhode Island, known as the Builders' Iron Foundry; the founderies of Messrs. Hinkley, Williams & Co., of Boston; and the Portland Company, of Portland, Maine; and at Reading, Pennsylvania, the Scott Foundry of Messrs. Seyfert, McManus & Co. From all these establishments, except the West Point Foundry, the Navy is furnished with 9-inch, 10-inch, and 11-inch guns, none of the old system being now manufactured.

From the Fort Pitt Foundry, in addition to the above classes of guns, it obtains the heavy 15-inch; and from the West Point Foundry it receives the Parrott rifles, of all calibres, which now constitute a part of the battery of nearly every vessel afloat, and the great effectiveness of which has been so strikingly manifest during the recent battles at Charleston. In procuring cannon for the Navy the same conditions have been exacted from all these founderies, as regards the character of metal and every other element necessary to constitute good and reliable guns. No gun has been accepted, as a *standard*, which has not been subjected to the ordeal of 1,000 rounds of service charges. With this standard thus established, all the guns of a contract must coincide in their composite elements.

The only exception to this rule has been in the case of the 15-inch guns cast upon the plan of Major Rodman, of the United States Army. Time did not permit of this proof being applied, and the guns were necessarily accepted and put into service, after having endured, however, somewhat more than the tests prescribed by the army regulations.

It is most gratifying to know that the judgment of the Navy Department has been sustained by the result of the further test which has

been applied to the first gun of this class made for the Navy, and which is still undergoing a series of experimental firing after being modified in form. All doubt is thus removed of the ability of the Fort Pitt Foundry to produce guns of this great size which can safely be relied upon, and the power thereby added to the fire of our Monitors has been most fully exemplified in the capture of the Atlanta.

• Before dismissing this branch of its report, it is just that the bureau should bear special testimony to the prompt and efficient manner in which the West Point Foundry has also done its share in supplying the need of the service for a new style of ordnance. The introduction of a few rifled guns of heavy calibre into the batteries of ships had already taken place in foreign navies prior to the date of our present rebellion; and in our own service experiments were being conducted at the Washington Navy-Yard, under the direction of Rear-Admiral Dahlgren, for the purpose of devising a system of rifled ordnance. Nothing decisive, however, had been accomplished, except with the rifled howitzer, and the experiments were rudely interrupted in the spring of 1861. At the same time Mr. Parrott was engaged in perfecting his present system, and the results obtained by him were so satisfactory, that in the summer of 1862 the bureau, in conjunction with the army ordnance, directed a 100-pounder to be subjected to a series of 1,000 service rounds. The gun stood the test without bursting, and its accuracy and range were considered sufficiently good to warrant the adoption of these rifled guns as a permanent part of our naval armament. Since then the demand for the several calibres has been unceasing; and, as before stated, they are to be found on board nearly every vessel now in service, and will continue to be supplied until some better system is established.

Finally, from personal inspection, and witnessing the firing of over one hundred rounds from these guns at the West Point Foundry recently, the bureau is satisfied that whenever attention is paid to details, and even moderate skill in the manner of loading and firing is attained, they will prove the most serviceable rifled guns that have ever been introduced into any service. It should be remarked also that the average cost of these guns is much below that of any others which have been offered to the Government.

The following extract from Commander Wise's Report for 1864 will show in general the new armament of the American Navy, and affords the basis of a comparison between this and that of the ships of Europe, and exhibits the manner in which the American idea was wrought out in practice:

The governing rule, in arming our ships-of-war, has been to place on board of them the very heaviest and most effective guns they can bear with safety. In general, it may be stated that the 9-inch are used for broadside, the 10-inch and 11-inch and the Parrott rifles in pivot, the 15-inch for the Monitor turrets, and the bronze howitzers and rifles for boat and deck service inshore. A few of our ships continue to be armed with the 32-pounder and 8-inch guns of the old system; but these will probably give way to the modified guns of similar classes above alluded to.

As no special changes have been made in the general arrangement of batteries since my last report, the same vessels mentioned therein, as types of their rate, may be again taken to illustrate the system of armament still in vogue.

Thus, the battery of a first rate is presented by the *Minnesota*, carrying:

1 150-pounder rifled	}	In pivot.
1 11-inch smooth		
42 9-inch smooth	}	In broadside, and
4 100-pounder rifled.....		
4 howitzers.		

Of a second rate, by the *Brooklyn*, carrying:

2 100-pounders rifled	}	In broadside, and
20 9-inch smooth		
2 60-pounders rifled		
2 howitzers.		

Of a third rate, by the *Eutaw*, carrying:

2 100-pounders rifled	}	In broadside.
4 9-inch smooth		
2 24-pounders smooth		
2 24-pounders rifled		

Of the fourth rates, by the *Owasco*, carrying:

1 11-inch smooth	}	In pivot.
1 20-pounder rifled.....		
2 24-pounders howitzers.....		In broadside.

And by the *Nipsic*, carrying:

1 150-pounder rifled	}	In pivot.
1 30-pounder rifled		
2 9-inch smooth		In broadside, and
4 howitzers.		

Of the Monitors, by

The Tonawanda, carrying.....	4	15-inch.
The Onondaga, carrying.....	2	15-inch.
		2 150-pounders.
The Montauk carrying	1	15-inch.
	1	150-pounder.

Of the iron-plated gunboats of the Western rivers, by the Carondelet, carrying:

3	9-inch.
4	8-inch.
2	100-pounder rifles.
1	50-pounder “
1	30-pounder “

The development of the power of each individual ship named as representatives of the several rates, is:

	In shot. lbs.	In shells. lbs.
First rate	2,606	2,123
Second rate	1,220	990
Third rate	424	343
Fourth rate	210	183
and.....	294	255

In the Monitors:

Tonawanda	1,764	1,320
Onondaga.....	1,180	980
Montauk.....	606	465

In the Western gunboat:

Carondelet.....	588	480
-----------------	-----	-----

These figures express the weight of metal thrown for breaching purposes by the guns at a single broadside in solid shot or shells. Conjoined with these, however, are the destructive and terrible agencies of grape, canister, and shrapnel, available at all times in the general course of naval warfare, but most especially and signally so when used against uncovered masses of men. The effective power of a ship is therefore increased in a very great degree by these auxiliaries, which are common to both rifled and smooth-bores, excepting grape, which is not used in the rifles.

It will be noticed that in each of the four rates of vessels above mentioned, pivot-guns are associated with those of broadside, so as to meet more fully the necessity for long range at high elevations in chasing

or bombardment, and at the same time to maintain a direct fire without materially altering the course of the vessel. The mechanical arrangement of the pivot-carriage also enables the mounting and working with ease a much heavier gun than could possibly be handled in an ordinary broadside carriage.

These pivot-guns are always placed near the ends of the vessel, and, therefore, do not interfere in the least with the working of the broadside.* The rapidity of fire from them is of course not so great as from an individual gun of broadside, but it is fully sufficient for the purpose of accuracy at ranges beyond the reach of the lesser calibres. No ship can, therefore, be considered properly armed that has not a pivot-gun of greater power and range than the guns of broadside. But whether a battery consisting entirely of heavy pivot-guns would be more formidable than one of broadside alone, the aggregate weights being equal, has not yet been tried, the only effort of the kind being that of the Niagara, which has a battery of twelve 150-pounder rifles mounted in pivot, and no regular broadside guns. It is not worth while, however, to speculate on the probable results of a battery so constituted. No doubt under certain circumstances the peculiar merits of the plan would be fully developed; but whether its excellence would ever be made so manifest as to cause its adoption in lieu of the present mixed system of pivot and broadside, is a question which could only be decided under all the varying conditions of an engagement at sea.

The decisive power of the heavy gun in pivot is, however, most strikingly exemplified in the recent fight between the Kearsarge and the Alabama, although the distance at which the action was fought was fully within the scope of the broadside 32-pounders of either vessel, being only about 700 yards. The water also was smooth, and both ships moved steadily under steam in a continuous circle around a common centre. Every condition was therefore most favorable for the full exercise of the offensive power of each class and description of gun used; but it does not appear from the official reports, or the published statements of the affair, that much damage was inflicted on either vessel by the guns of broadside, the decisive work having been performed only by the pivot-guns of the Kearsarge. These were the two 11-inch guns mounted at either end of the ship, the light 30-pounder being too feeble to have had any bearing whatever upon the results.

There does not appear to have been the slightest difficulty in manœuvring these pivots, and although their fire was much slower than that of the broadside, yet the weight and explosive power of their shells fully

* An exception to this rule is found in the New Ironsides and Niagara.

compensated for any want of rapidity. For it is stated in the official reports that the total number of rounds fired by the Kearsarge in this action of one hour and two minutes, was, exclusive of those from the 12-pounder bronze rifle, one hundred and sixty-three. That is, from the 11-inch, 55; from the 30-pounder, 48; and from the broadside 32-pounders, 60=163.

Throwing out the rounds fired from the 30-pounder, we have nearly an equal number from the pivot and broadside guns; but the preponderance of power is decidedly in favor of the 55 11-inch shells, weighing in the aggregate 7,425 pounds of iron, with an explosive charge in each shell of six pounds of powder, while the total weight of metal thrown from the 32-pounders of broadside in the 60 rounds is in solid shot 1,920 pounds and in shells only 832 pounds of iron, with an explosive charge of not quite one pound in each shell.

We gather from the official report of Captain Semmes of the Alabama that the effect of the 11-inch shells of the Kearsarge was most disastrous. For he states that "after the lapse of about one hour and ten minutes our [his] ship was ascertained to be in a sinking condition, the enemy's shell having exploded in our sides and between decks, opening large apertures, through which the water rushed with great rapidity." This part of his report is most certainly true, if all the rest is questionable.

On the other hand, the Alabama opposed to this fire one Blakely 7-inch, or 120-pounder rifle, one 68-pounder—both in pivot, and the especial favorites of the English Navy—and six 32-pounders, in broadside. The weight of metal thrown from these guns, assuming that all were used, is about equal to that from the Kearsarge; but it is also stated that the firing of the Alabama was much more rapid than that of the Kearsarge. This, however, together with great precision and concentration of blows, was to have been expected from a crew trained in the gunnery exercises of a navy whose boasted superiority over all others was never before so signally disproved. It does not appear that correctness of aim was much attended to by the crew of the Alabama, whilst thus delivering their rapid fire; for the Kearsarge was only hit twenty-eight times in all, and in no instance was she badly injured. Singularly enough, not a man was killed outright on board of her, and only three were wounded.

There can be no question with regard to the superiority of the 11-inch guns over the Blakely 120-pounder, and the 68-pounder of the English pivot system, either in penetration, smashing effect of the shot, or explosive power of the shells. Hence, although the vessels were

nearly equally matched as to tonnage, motive power, and number of men and guns, yet the preponderating influence of calibre, properly disposed in pivot. and coolly and deliberately handled by American 'seamen, was sufficient to settle the question briefly, and most conclusively.

In addition to the improvements in heavy ordnance referred to, a corresponding advance was made in the construction of carriages for mounting and manœuvring them in broadsides and in pivot. This question was one of very grave importance, and not easily disposed of, as will appear, when we reflect upon the violent rolling and pitching motion of a ship at sea, even in the ordinary weather, when the batteries may be cast adrift for fighting with safety.

A series of well-conducted experiments at the experimental battery of the Washington Navy-Yard and on board the ordnance practice-ship Plymouth, under the command of Rear-Admiral (then Captain) Dahlgren, resulted in the complete solution of the difficulties so far as the 9 and 11 inch guns were concerned: that is to say, a broadside carriage for the 9-inch, and a pivot carriage for the 11-inch, both of *wood*, were designed and constructed for our frigates of the Merrimack class, and were found to be as perfect in their operation as could be expected.

The difficulty, however, of obtaining seasoned timber during the war led the attention of the present Chief of the Bureau of Ordnance to the question of substituting iron for wood in the construction of these carriages, and the first trial of iron was made in the carriages of the New Ironsides. These were found to be better than those made of wood, and it is believed by many that the days of wooden carriages are numbered.

Iron was an indispensable necessity in the carriages of the Monitors, and the genius of Ericsson soon overcame all mechanical difficulties in the methods of movement and compression. Since then he has also designed and successfully tried in practice a carriage upon which the 15-inch guns can be mounted and worked in broadside without difficulty or danger—the momentum of these heavy guns being easily controlled by means of a rotary compressor. The advance herein made over the slow and expensive trials of the English may be inferred from the fact that they have hitherto failed in controlling even a 12-ton gun in a sea-way.

CHAPTER XVII.

THE RELIEF OF FORT PICKENS.

It has been truly said that the determination to relieve Fort Sumter was the turning-point, and the decisive one, in Mr. Lincoln's administration. The doctrine of State rights as held and acted upon by the Southern leaders, and as enunciated in another form by Mr. Buchanan, that the General Government has no power to coerce a State, had so far influenced public thought as nearly to paralyze the sovereign power by which the whole nation was represented. General Scott, then in command of the Army, and whose influence at that time was very great, almost controlling, hesitated in regard to the policy, and the right even, of *invading*, as the term then was, the soil of a "sovereign State," and wavered in reference to the question of relieving Sumter on that account.

On this question, as on that of slavery, there was a direct antagonism between the North and the South. From the earliest period of our history the Northern idea of liberty was of freedom for each individual to act within his sphere as a part of the political body, under the due restraints of government and law. Thus the citizen, the township, the county, the State were all regarded as free and independent, each in the proper sphere, but each also subordinate to the higher authority; and when the State was reached, it too was regarded as an integral and inseparable portion of the supreme body, the nation, "The United States." However individuals may at times have declared, under local and temporary excitements, another theory, it cannot be denied that the prevailing sentiment of the North has

been and still is opposed to the doctrine of sovereignty for the States.

On the other hand, that impatience of all control which has been and is the characteristic of those who have been moulded by the influences of the slave system, that disregard of all law and authority which interferes with the individual will, manifested itself even in political institutions; and stimulated as these feelings were, by a jealousy of the growing power of the North, they exhibited themselves, first in the assertion of sovereign independence of the central Government, and then, when they saw that this Government must, from necessity, be controlled by the North, they endeavored to secure this asserted independence by force of arms. It was virtually the old question between a loose, uncertain confederacy of independent States, allied during pleasure, as States, and the better and more perfect union, not of States but of the people, which was contemplated by the Constitution. When Mr. Lincoln, therefore, decided to relieve Fort Sumter and send troops into Virginia, he determined that, so far as in him lay, the United States should be a nation, and not a mere confederacy.

This State sovereignty and no coercion policy, was the controlling one of Mr. Buchanan's administration, on which he seems to have been guided entirely by members of his Cabinet and their outside sympathizers. As the result of this, after long apparent halting between two opinions, Mr. Buchanan refused to reënforce Fort Sumter, and on the 29th of January, 1861, the following telegram was forwarded to Fort Pickens:

WASHINGTON, January 29, 1861.

Received at PENSACOLA, January 29, 1861, at 9 P. M. }

To Captain JAMES GLYNN, commanding the Macedonian; Captain W. S. WALKER, commanding the Brooklyn; or other naval officers in command; and Lieutenant ADAM J. SLEMMER, First Regiment Artillery, U. S. A., commanding Fort Pickens:

In consequence of the assurances received from Mr. Mallory, in a telegram of yesterday to Messrs. Bigler, Hunter, and Slidell, with a request that it should be laid before the President, that Fort Pickens would not be assaulted; and an offer of such an assurance to the same effect from Colonel Chase, for the purpose of avoiding a hostile collision, upon receiving satisfactory assurances from Mr. Mallory and Colonel Chase that

Fort Pickens will not be attacked; you are instructed not to land the company on board the Brooklyn, unless said fort shall be attacked, or preparations shall be made for its attack. The provisions necessary for the supply of the fort you will land. The Brooklyn and the other vessels-of-war on the station will remain, and you will exercise the utmost vigilance, and be prepared at a moment's warning to land the company at Fort Pickens; and you and they will instantly repel any attack on the fort.

The President yesterday sent a special message to Congress commending the Virginia resolutions of compromise. The commissioners of different States are to meet here on Monday, fourth (4th) of February, and it is important that, during their session, a collision of arms should be avoided, unless an attack should be made, or there should be preparations for such an attack. In either event, the Brooklyn and the other vessels will act promptly. Your right, and that of other officers in command at Pensacola, freely to communicate with the Government, by special messenger, and its right, in the same manner, to communicate with yourselves and them, will remain intact, as the basis of the present instructions.

J. HOLT, *Secretary of War.*

I. TOUCEY, *Secretary of Navy.*

This message explains itself. Its object was to leave the rebels at Pensacola, as they were also at Charleston, to complete, at their leisure and without interruption, the batteries by which they could not only defend themselves, but could batter down Sumter and Pickens so soon as they were prepared. When afterward, subsequent to Mr. Lincoln's inauguration, General Scott sent an order to land the troops in the Brooklyn, knowing nothing of the secret compact, Captain Adams, commanding the squadron there, refused to obey, and justified himself by stating that it would violate the armistice which had been entered into with the rebel leaders.

At this point in the history, Fort Sumter becomes connected with Fort Pickens in the movements of the Government; and in order to set in a clear light the relief of Fort Pickens, it is necessary to refer to some facts, related in another chapter, concerning Sumter. The policy of Mr. Buchanan and his Cabinet in reference to the Southern forts very naturally had some influence at first upon Mr. Lincoln's administration. For some

weeks there was apparent hesitancy, and some real division of opinion in his Cabinet as to sending troops and provisions to Major Anderson and his beleaguered garrison. The Secretary of State was understood to have been decidedly in favor of leaving Sumter without assistance, and even of giving it up into the hands of the rebels. His earnest wishes, and the well-known opinions of General Scott and most of the Cabinet, may have induced Mr. Seward to suppose that it was perfectly safe to make the promise that the fort should be evacuated, which promise Judge Campbell declares was made. Mr. Seward may have considered it already decided upon, and as lacking only the formal action. Unexpectedly, however, Mr. Lincoln, in the latter part of March, decided to assume the responsibility himself, and to send an expedition to Sumter. This decision was promptly acted upon; and selecting Captain Fox, then in private life, to command the relieving squadron, he was sent to New York to get it ready for sea.

At this time it seemed as if nothing could be concealed from the conspirators. In some manner they often penetrated even Cabinet secrets, and a knowledge or a suspicion of what was being done having reached the self-styled rebel commissioners, they asked from the State Department, indirectly and unofficially, of course, an explanation. What was meant by the reply, "*Faith kept in regard to Sumter, wait and see*," each one must judge for himself and in the light of subsequent events. It was charged at the time, or as soon as the facts were known, that the Secretary of State, having committed himself, *unofficially*, to the rebel commissioners, determined to thwart the purpose of the President, and prevent the relief of the fort. To decide such questions is not the province of the historian, but he has no right to conceal the facts, and upon them the country will make up its verdict.

It was well known, of course, to the members of the Cabinet that the expedition under Captain Fox was being rapidly fitted out in New York, and it was also known that the Government had at command but a single vessel whose size and battery were sufficient for the main force of the proposed squadron, the Powhatan, commanded by Captain Samuel Mercer. This ship and other smaller ones and a few transports were placed by the

Secretary of the Navy at the control of Captain Fox, to carry out the intentions of the President. All who knew any thing of the matter also knew that without the Powhatan the expedition must necessarily fail.

The following facts will show what was actually done. An order was procured from the President, without his understanding its real import, as he afterward declared, which order authorized the employment of the Powhatan for another service. The existence of this order and its object were carefully concealed from the Secretary of the Navy and from Captain Fox, under whose eye the Powhatan was being fitted out for Sumter. The Secretary, and Captain Mercer, who commanded the Powhatan, supposed all was going smoothly on.

When the Powhatan was ready she started down the bay under orders for Sumter. When off Staten Island the ship was boarded, and an order produced from the President transferring the ship from the command of Captain Mercer to Lieutenant D. D. Porter, who took charge of her, and she went on her way, not to Sumter, but to Fort Pickens, neither Captain Fox nor the Secretary of the Navy having been notified of any change. Captain Mercer left the vessel and went ashore. Thus, as is detailed more at length in another chapter, the expedition to Fort Sumter was defeated, while the Harvey telegram, giving information to the rebels that an attempt would be made to relieve Sumter, induced them to order an immediate attack, and the fort was captured.

When these facts became known, it was seen that they bore somewhat heavily upon the Secretary of State, and an explanatory statement was made by General (then Captain) Meigs. He states in substance that he and the Secretary of State planned an expedition for the relief of Fort Pickens, so important that it was necessary to keep it entirely secret even from the Secretary of the Navy himself, although his ships were absolutely necessary in carrying out their plan. The manner in which the Powhatan was obtained is thus very frankly stated by General Meigs: "An order," he says, "was extracted" (perhaps a well-chosen word) "on the recommendation of Secretary Seward, detaching the Powhatan from the Sumter expedition and sending her to Fort Pickens." At the close of his

statement General Meigs says: "In conclusion, permit me to remark that this, the first successful military expedition of the war, originated with Mr. Seward. Until it sailed, the United States had declined everywhere."

The brilliancy of this exploit will be tested by the following facts. In January, 1861, the Brooklyn had been sent out to Fort Pickens with troops to reënforce the garrison. On the 29th January the telegram quoted before was sent, forbidding the landing of the troops. General Scott sent out an order, dated March 12th, directing that the troops should be landed from the Brooklyn. This Captain Adams, commanding the squadron, declined to do, justifying himself by the armistice which had been entered into between Secretary Holt and Secretary Toucey and the rebel leaders. The following is the letter of Captain Adams to the Secretary of the Navy, to which is added the reply of Mr. Welles:

U. S. FRIGATE SABINE, OFF PENSACOLA, April 1, 1861.

SIR: I have the honor to enclose a copy of a letter addressed to me by Captain Vodges, U. S. A., who is here in command of some troops sent out in January last, to reënforce the garrison of Fort Pickens. I have declined to land the men as Captain Vodges requests, as it would be in direct violation of the orders of the Navy Department under which I am acting. The instructions from General Scott to Captain Vodges are of old date (March 12th), and may have been given without a full knowledge of the condition of affairs here—they would be no justification. Such a step is too important to be taken without the clearest orders from proper authority. It would certainly be viewed as a hostile act, and would be resisted to the utmost. No one acquainted with the feelings of the military assembled under General Bragg can doubt that it would be considered not only a declaration but an act of war. It would be a serious thing to bring on by any precipitation a collision which may be entirely against the wishes of the Administration. At present both sides are faithfully observing the agreement entered into by the United States Government with Mr. Mallory and Colonel Chase. This agreement binds us not to reënforce Fort Pickens unless it shall be attacked or threatened. It binds them not to attack it unless we should attempt to reënforce it. I saw General Bragg on the 30th ult., who reassured me the conditions on their part should not be violated. While I cannot take on myself, under such insufficient authority as General Scott's order, the fearful responsibility of an act which seems to render

civil war inevitable, I am ready at all times to carry out whatever orders I may receive from the Honorable the Secretary of the Navy.

In conclusion, I beg you will please to send me instructions as soon as possible, that I may be relieved from a painful embarrassment.

Very respectfully, your obedient servant,

H. A. ADAMS, *Captain, Senior Officer present.*

To the Hon. GIDEON WELLES,

Secretary of the Navy, Washington, D. C.

NAVY DEPARTMENT, April 6, 1861.

Captain HENRY A. ADAMS, commanding Naval Force off Pensacola :

SIR : Your dispatch of April 1st is received. The Department regrets that you did not comply with the request of Captain Vodges to carry into effect the orders of General Scott, sent out by the Crusader under the orders of this Department.

You will immediately, on the first favorable opportunity after the receipt of this order, afford every facility to Captain Vodges, by boats and other means, to enable him to land the troops under his command, it being the wish and intention of the Navy Department to coöperate with the War Department in that object.

I am, sir, respectfully, etc.,

GIDEON WELLES, *Secretary of the Navy.*

In order to a full understanding of this whole matter, it is well that the reader should also have before him the following letters :

HEADQUARTERS OF THE ARMY, WASHINGTON, March 12, 1861.

SIR : At the first favorable moment you will land with your company, reënforce Fort Pickens, and hold the same until further notice.

Report frequently, if opportunities present themselves, on the condition of the fort and the circumstances around you. I write by command of Lieutenant-General Scott.

I am, sir, very respectfully, your obedient servant,

E. D. TOWNSEND, *Assistant Adjutant-General.*

Captain I. VODGES, U. S. A., on board U. S. Sloop-of-War

the Brooklyn, off Fort Pickens, Pensacola Harbor, Fla.

U. S. FRIGATE SABINE, OFF PENSACOLA, FLA., April 1, 1861.

To *Captain H. A. ADAMS, commanding Naval Forces off Pensacola :*

SIR : Herewith I send you a copy of an order received by me last night. You will see by it that I am directed to land my command at

the earliest opportunity. I have, therefore, to request that you will place at my disposal such boats and other means as will enable me to carry into effect the enclosed order. Yours, etc.,

I. VODGES, *Captain First Artillery, commanding.*

So soon as Captain Adams's letter, which was sent by a special messenger through the insurgent States, was received at the Navy Department on the afternoon of the 6th of April, and on the evening of that day Lieutenant Worden, who afterward commanded the Monitor in her fight with the Merrimack, was sent, under orders from the Secretary of the Navy, across the country with an order directing Captain Adams to land at once the troops from the Brooklyn. Lieutenant Worden committed this to memory on his way and destroyed the paper, lest he might be arrested and the order be found upon him. Not without difficulty Worden made his way to Pensacola and proceeded to the fort on the 12th of April. That evening the fort was reënforced and made secure by the landing of the troops from the Brooklyn.

Lieutenant Worden returned to Pensacola and commenced his homeward journey, but the news of the reënforcement of the fort preceded him through the telegraph, and it was also suggested that he had undoubtedly borne the order for landing the troops. He had carried it in his memory, and reproducing it from memory and certifying, as a naval officer, to its correctness, it became a valid order to Captain Adams. The result was, that Worden was arrested as a spy at Montgomery and kept there, in close confinement, for six months, and was, as is believed, the first person seized as a prisoner in the war; and it was a fitting retribution that afterward in the Monitor he struck the fatal blow at the rebel navy.

Thus, on the 12th of April, Fort Pickens was relieved and made secure by the promptness and energy of the Secretary of the Navy, and at the great and personal risk and suffering of one of its officers. After all had been accomplished, so that the fort for the present was secure, the Powhatan, on the 17th of April, appeared off the harbor. The Atlantic, one of the transports, arrived on the 16th of April, and landed her troops before the Powhatan came, and consequently *without her help*. Some days afterward the Illinois, another transport, reached the harbor.

Let it now be borne in mind that there were already four vessels-of-war at Fort Pickens or off the harbor—the Sabine, the Brooklyn, and two others. The Powhatan was not needed to cover the landing of troops. The vessels already there were not only able to do it, but *did do it*, with no assistance from the Powhatan. Nor was the Powhatan needed to convoy the transports, for she did not sail in company with them; and, moreover, the Navy Department had provided for the relief of the fort independently of the new expedition, and it had already been done. What, then, was the mission of the Powhatan to Pensacola? If the object was simply to relieve the fort, was it not quite sufficient to send the transports on, and let the vessels already there receive them and protect their landing, as they actually did? The Powhatan was not needed either to convoy the transports or to land the troops, and she did neither of these things. Besides, if there was so great an anxiety in regard to Fort Pickens, what more natural than to have stepped into the office of the Secretary of the Navy to ascertain the actual condition of things? A single inquiry would have disclosed the fact that all needed measures had already been taken, and no second expedition was required.

These facts seem to indicate that—however necessary it might have been to detach the Powhatan from Captain Fox's squadron and secure the failure of his expedition, in order to "keep faith in regard to Sumter," in spite of the President—there was no exigency in the public service that required that she should be sent to Pickens. Whatever was intended, the result was that Sumter was delivered into the hands of the rebels.

CHAPTER XVIII.

THE BEGINNING OF THE CONFLICT—RESCUE OF THE FRIGATE CONSTITUTION.

SHOULD the history of the "Great Rebellion" be written from the same stand-point which was occupied by the historian of the Jews, the interpositions of God, except those by miracle, would perhaps be as frequent and as manifest as those which marked the exodus of the Hebrews and their settlement in Canaan.

Every believer in the Christian's God—a God who has not only created, but who superintends and directs the affairs of His universe, so that not a sparrow falls without His knowledge—will not fail to perceive a guiding and protecting power controlling the great conflict throughout all its course, saving the North from the natural consequences of mistakes and folly; turning apparent disaster into actual triumph; educating the public mind, alike by defeat and victory, until the real nature of the conflict was clearly seen and the country was prepared to adopt the only means through which God would grant us success.

The grand battle in all its essential features, its duration, its range, its magnitude, the forces and weapons on either side, the influence abroad and at home, all lay without the field of ordinary human calculation.

Some, then regarded as among the most sagacious statesmen, predicted that the course of the rebellion would be limited to ninety days; the President thought it quite sufficient to ask for seventy-five thousand men; shrewd men, as they were thought to be, talked of the necessity of thirty or forty *sailing* vessels for the blockade; most were fully determined that slavery should

by no means have any place in the struggle, and statesmen and politicians in Europe viewed the cause of the North as absolutely hopeless; they even regarded the whole question as settled before the battle began.

The events of the war, as it went on, baffled all human foresight. That which all men expected did not come to pass, that which all declared could never be accomplished was actually done; and our leaders were compelled to adopt measures which they had rejected not only as unwise but impossible.

Both parties triumphed where they expected defeat, and were defeated where they counted upon certain and easy victory. Both were borne on by a force which they could not resist, the one to ultimate success, and the other to ruin; and that force was the directing power of God.

In the latter part of April, 1861, and soon after the firing upon Fort Sumter, the rebels were rapidly completing a battle-line that stretched across the territory of the United States, from Southwestern Missouri to Chesapeake Bay. It is not intended to state that this was one unbroken chain of military posts within supporting distance of each other, but that main positions were occupied, and there was a general movement to establish and maintain this as the chief line of defence.

This line was stretched far to the north of the city of Washington; and as Maryland was expected to hold securely the northeastern point, and so cut off all direct communication with the North, it was thought by the rebels that the capital would be speedily and easily captured, and as easily held, because it would be at least forty miles within their lines. On the evening of April 19, 1861, a mob from Baltimore lay in wait for the train from Philadelphia at Canton, fired at the engineer, who stopped the train, when the ruffians drove the passengers from the cars and took the train back to Gunpowder Creek, where they burned the draw of the bridge; then came back to Bush River, and burned the draw of the bridge at that point, thus cutting off all railroad communication between Baltimore and the North, and preventing the sending of troops by rail. At the same time the Government was informed that no more troops from the North could pass through Baltimore unless they could fight their way through.

Thus, as was thought, Washington was effectually cut off from the North in that direction. At the same time the shores of the Potomac were occupied with rebel batteries, which, as was supposed, would prevent troops or provisions from reaching the capital by water. The boast that the rebel flag would float from the dome of the capitol before the end of May seemed not entirely unreasonable, when Washington was thus hemmed in on both sides, when a formidable army was being rapidly organized in Virginia for its capture, and when, as it would seem, the one thought of the rebels was to rush upon the city while thus isolated and comparatively defenceless.

Why it was not done is one of those mysteries of human conduct which are not to be explained by any of the ordinary motives that govern men, and must probably be referred to influences exerted upon the mind by a superior power. That Washington might have been captured in the early days of the contest, with the means at the disposal of the rebel chief, no one now probably doubts. Why it was not done it may be impossible to say. It was one of the great opportunities which, once lost, never return. While Washington was in this condition, and Baltimore and its railroads on the one hand and the Potomac on the other were held by the rebels, a plan was conceived for capturing the frigate *Constitution*, then lying in the harbor of Annapolis as a school-ship connected with the United States Naval Academy.

The conspirators were inspired with the thought that this historic ship, the pride and favorite of the country, and so well known in Europe, might be the first to bear their traitor flag, and thus a rebel navy would be born in a manner that would kindle enthusiasm at the South in proportion as it would humble and depress the North. Immediately after the secession of Virginia, the intentions of the rebels were so plainly manifested that it was thought to be of the utmost importance to get the frigate over the bar. She was nearly defenceless where she lay, having only a crew of twenty-five men, and a class of seventy-six midshipmen from the academy, who slept at their quarters, and she was therefore liable at any time to be attacked by boarding. Troops were constantly drilling on shore and exchanging signals, while large parties were around the ship, apparently

seeking the most assailable point. She had four anchors out when the order came to get her over the bar. One anchor was raised, and the other cables were slipped. By one of those curious coincidences which impart great interest to what would otherwise be unimportant facts, the Eighth Massachusetts regiment, under the command of General Butler, had just reached Annapolis. They were hastening to the relief of Washington, and when they arrived at Havre de Grace found that the railroad bridges between that point and Baltimore had been burned, and their further progress by rail was stopped. General Butler was not a man to be easily thwarted, and the soldiers shared his spirit. He procured a steamboat and proceeded with his regiment to Annapolis, with the intention of marching from that point to Washington. He reached Annapolis in season to render the country an important service, in connection with the United States officers who had the old frigate in charge. At the request of the superintendent of the Naval Academy, he placed a detachment of his troops, who had been seamen, on board the ship, to assist the crew, and then the steamer Maryland, which the general had seized, was brought alongside for the purpose of towing her out, having first received the frigate's guns in order to lighten her. The officers and engineer of the Maryland were so averse to the duty, that it was necessary to put them under a guard with revolvers, to compel them to work and proceed with the vessel. The frigate, by great exertions, was at length dragged over the bar, but grounded on the outer spit. She was still in a perilous position. At 10 p. m. word was brought that an attempt was about to be made to obstruct the channel outside of the ship.

It was seen that what was to be done must be done quickly. Kedges were laid out, and an attempt was made to warp the frigate over the spit, while a part of the crew stood by the guns which had been replaced after passing the bar. The ship was started, but the traitor officers of the Maryland took advantage of the occasion to run the steamer aground, and, a squall coming up, the Constitution was driven ashore again. Not knowing how soon they might be attacked, nor by what numbers, or whether escape might not be effectually prevented by the obstructing of the channel, the officers and crew passed the re-

maining hours of the night in great anxiety. Greatly to their relief, at daylight a steam-tug from Havre de Grace was seen approaching, and by its aid the noble old frigate was towed out. The Constitution was originally manned by men from Massachusetts when she was being prepared to win the first great triumph of the American Navy, and it was a fitting coincidence that Massachusetts men, long after, should be permitted to aid in saving her from the dishonor of carrying at her mast-head the flag of the traitors. She was immediately taken round to New York by the steamer R. R. Cuyler. Next to the occupation of Washington, few things could have given the rebels greater satisfaction, or obtained for them more *éclat* in England; than the capture of Old Ironsides. Thanks to Commodore Blake and his assistant officers, and to General Butler and his boys from the Old Bay State, they missed the coveted prize.

It is, perhaps, impossible to say where a proper, authorized faith in the Providence of God ends, and what we call superstition begins; but it doubtless had some influence upon both parties that the attack upon this historic frigate, the representative of the days of our naval renown, should have utterly failed, and that she came unscathed to the North, bringing her national honors and national name, and bearing that same national flag which long ago she had so nobly defended.

It is probably the last peril that Old Ironsides will ever encounter. She has far outlived her age, and, comparatively useless in our modern war, like a worn-out veteran, she is honored and loved for what she has been, and the glorious achievements of her youth, when not merely from her actual power, but from enthusiastic faith in her invincibility, she was the most formidable frigate of the world. She has fitly bequeathed her pet name to one far more powerful than herself; for a whole squadron of frigates, such as the Constitution was in the day of her pride, would be no match for the terrible battery of our New Ironsides, which was the queen of broadside iron-clads.

CHAPTER XIX.

OPERATIONS ON THE POTOMAC.

IF we may judge of the designs of the rebels by their operations, we may believe that the plan of their first campaign was to isolate Washington on the north by stretching their battle-line to Baltimore, and holding all the railroads leading from that city north, west, and south, so as to shut off from the capital both reënforcements and supplies, and then so to blockade the Potomac that nothing could reach it from the south. In this way, as they thought, it would fall an easy prey to the army which they were then massing in Virginia. When this was partially unfolded, and in part successfully executed, when sympathizers controlled Baltimore, when her railroads were seized, when Northern troops were forbidden to march across the soil of Maryland, and batteries were established on the Potomac, and the rebel flag was flying so near as Alexandria, in sight of the capitol, it was thought by men of good military judgment that the success of the conspirators was nearly certain. They and all their friends believed it, and throughout the South the occupation of Washington was regarded as a thing already accomplished, and this unbounded confidence was, in all probability, one chief cause of their failure.

When troops from the North, overcoming all obstacles, began to pour into Washington, and it became apparent that the North would keep its highways across Maryland open at all hazards, then, as there was but one line of railroad between the capital and Baltimore, it was believed that this would prove insufficient to transport both troops and supplies, and therefore more strenuous efforts were made by the conspirators to close the Potomac.

From Alexandria southward the commanding points were occupied, and batteries were established and mounted with guns, which, as was soon seen, were of longer range than most on board our vessels. After the burning and seizure of the navy-yard at Norfolk, batteries were also planted at all the strategic points in the neighboring waters.

It is easily seen that Washington would be in constant peril, if it could be shut up to the single line of railroad; and, as these batteries could not be approached by land by any force then at command, the Government was compelled to turn to the Navy Department for the needed assistance. Indeed, without a naval force to engage these batteries, and keep the Potomac open, our cause would, at the first, have been nearly hopeless. Could the insurgents have succeeded in closing the Potomac, it would have been impossible to collect at Washington an army sufficient for the defence of the city, and even if the troops could have been brought on, they could not have been supplied with provisions and munitions of war without the aid of the river.

The very first operations of the Navy were vital to the success of the cause, and yet from their very nature were almost unknown to the public. Every movement of the Army was made known in all quarters of the land, and it was right that it should be so; but if the people could have known what another class of men on the ships were doing and suffering for the common cause, and what sleepless vigilance and untiring activity were necessary both for seamen and officers to render success possible for the Army, then the Navy would have also received from the first its due proportion of honor.

The first business of the Navy on the Potomac was to patrol the river from Washington to its mouth, to inspect both shores daily so far as possible, and to observe whether any preparations for batteries were being made at any point, and watch for any transports with troops or provisions, and convoy them to Washington.

Every effort was made by the rebels to keep up a constant and active communication between the two shores of the Potomac; mails from Washington and from Northern sympathizers and their friends generally, and supplies of all kinds, were con-

veyed across the river by night, and a night-patrol or picket-guard, composed of the boats of the ships, was among the arduous duties which were constantly performed. They destroyed all the row-boats they could find, and all visible means of crossing the river; they intercepted a large number of rebel mails and smugglers; but with all their watchfulness, many an enterprising rebel escaped their scrutiny, and quite a regular interchange of letters was kept up between the conspirators and their Northern accomplices.

The Potomac flotilla was composed of small vessels, which at first carried only a light armament, and were therefore not very formidable antagonists of land batteries armed with heavier guns than their own, and this must be considered when estimating the work they performed. The Pawnee was the largest among them, and she was a sloop of less than 1,300 tons, with a battery of fifteen guns, none of which, at first, were of large calibre or long range. The following quotation from Sir Howard Douglas is applicable to the circumstances under which these small wooden vessels fought the shore batteries on the Potomac: "The attack of fortresses and powerful land batteries with a naval force only, must ever be a hazardous, and perhaps desperate undertaking."

The first report of the establishment of any batteries on the upper Potomac was from the commander of the steamer *Pocahontas*, May 14, 1861. He states, from information derived from another, that a battery, an earthwork, with four embrasures, had been erected at the railroad terminus at Aquia Creek, about forty-five miles from Washington. The Government at that moment seemed indisposed to precipitate hostilities; and for some days our vessels, not being attacked, confined themselves to watching, and reporting the progress of the works.

In the mean time it had been determined that Alexandria should be occupied, preparatory to a general movement into Virginia. On the 23d of May the *Pawnee* was lying off the town, commanding it completely with her batteries. She remained in this position until the 24th, having it in her power at any time to capture or destroy the city, but there was no coöperating land force by which it could be held. On the morning of the 24th two steamers were seen coming down from the navy-yard,

with troops on board; and, as they approached the town, the commander of the Pawnee, seeing that the men necessary to hold the place were at hand, sent a boat with a lieutenant on shore to demand the surrender of the city. The lieutenant held a consultation with the insurgent officer commanding the rebel force, who refused to surrender, but agreed to evacuate the place by 8 o'clock A. M. Lieutenant Lowry, in returning to his ship, reached the wharf just in season to meet Colonel Ellsworth landing with his regiment of Zouaves. He informed him of the arrangement made for the evacuation of the city. After reaching the Pawnee, Lieutenant Lowry was again sent on shore to coöperate with the troops. Not finding Colonel Ellsworth at the head of his regiment, for he was shot about that time, Lieutenant Lowry hoisted the American flag over the custom-house and upon a flag-staff in the street. He also took possession of a train of freight-cars just starting, but the locomotive escaped. At this time a detachment of troops arrived, that had marched from Washington by land, under Colonel Wilcox, and the commander of the Pawnee, S. C. Rowan, surrendered his jurisdiction to the Army. As the work of the Navy in this early movement has been little known, if at all, the official reports of Commander S. C. Rowan and Lieutenant Lowry are subjoined:

U. S. STEAMER PAWNEE, OFF ALEXANDRIA, *May 29, 1861.*

SIR: In obedience to your order of yesterday's date, to "furnish the Department with a minute report of your [my] proceedings during the night and morning of the 23d and 24th instant, communicating any thing of interest or importance that came under your [my] observation"—in reply, I have the honor to state that during the night of the 23d nothing of interest or importance occurred. On the morning of the 24th, about daylight, two steamers containing the Zouave regiment approached Alexandria from the navy-yard, for the purpose of landing and occupying that city. As soon as the steamer came in full view of the city, and so near as not to expose the secrecy of the expedition, I sent Lieutenant Lowry on shore to demand the surrender of the town. Lieutenant Lowry returned to the wharf in time to meet Colonel Ellsworth as he landed, and informed him that no resistance would be made—that the town would be evacuated. Shortly after Lieutenant Lowry left the ship, I sent Lieutenant Chaplin in the first cutter to lie off the

starting-point of the railroad cars, and to jump on shore immediately the steamers touched the wharf, and cut off the departure of the early morning train then at that point. The engine escaped, but the burden-cars laden with railroad iron were captured.

I sent a cutter, in charge of the master, to bring out two steamers, the Collyer and Gypsy, that had been seized by the secessionists; the former belonged to parties in Washington, and the latter to parties in Maryland. Both these vessels have been turned over to their respective commanders by the authority of the Department, and are now on their routes—the first between Washington and Alexandria, and the other between Alexandria and Fort Washington. I directed Lieutenant Lowry to return to the town and coöperate with the troops, under the impression that Colonel Ellsworth's command was the only force then moving on Alexandria, and that his knowledge of the localities, together with this additional force, would, in case of resistance, be valuable.

In demanding the surrender of Alexandria I was actuated solely by motives of humanity. I knew the town to be full of helpless women and children, mostly of the middle and poorer classes, whom I saw running frantically through the streets in search of protection as the troops landed.

A detailed account of what took place on shore, connected with this ship, will be found in the accompanying report made by Lieutenant Lowry.

I have the honor to be, very respectfully, your obedient servant,

S. C. ROWAN, *Commander.*

Hon. GIDEON WELLES, Secretary of the Navy.

U. S. STEAMER PAWNEE, OFF ALEXANDRIA, VA., May 24, 1861, 10.30 A. M.

SIR: In obedience to your verbal order, given this morning about 4.20 A. M., I proceeded on shore at this place and communicated with Major Jewett, commanding the Virginian secession forces at Alexandria. In your name I demanded the surrender of the place, stating that, as we were prepared to seize the place, it would be useless to resist, and that you were actuated simply by a desire to spare the shedding the blood of women and children.

The interview was held in the open street, surrounded by excited soldiers. Major Jewett said he would not surrender, that he would evacuate, or was about evacuating; that if hostilities were not opened upon him, he would not use any. He wanted to know how much time he could have; I told him I did not know; I would return to the Pawnee; that no time was to be lost. He said he would require till

8 A. M. to get such women, children, and property out as he would require.

I said: "Very well; I will go at once to the Pawnee. Should the troops land and you make no resistance I have no doubt that no harm will be done to the town and its inhabitants; should the Pawnee be obliged to open her batteries, no one knows better than yourself what would be the result."

I hastened to the river-side, and reached the wharf just in time to witness the first approach of the Zouaves under Colonel Ellsworth; the sentries on the wharf fired their muskets, which was returned by a scattering fire from the troops on board the transports.

As the troops commenced to land I sought out Colonel Ellsworth; told him in these words: "Sir, I am an officer of the Pawnee; I have been on shore with a flag of truce, demanding the surrender of the town; the commanding officer is already evacuating; he promises to make no resistance; the town is full of women and children." Colonel Ellsworth replied: "All right, sir; I will harm no one." I then proceeded with a detachment of men from the Pawnee under Lieutenant Chaplin, and took possession of the railroad and some burden-cars.

I informed Colonel Ellsworth of the whereabouts of the telegraph and other places. He landed his regiment with great rapidity. I proceeded to the Pawnee and reported to you, when you sent me back at once to coöperate with the troops, and to say that, as they had landed, you had no further jurisdiction, and that I should accompany the troops with the Pawnee's force, and take part in what should occur. I did so; found that Colonel Ellsworth was not at the head of his regiment, which had marched some distance up the street. After waiting some time, I advanced through the upper part of the town, hoisted the American ensign on a street flag-staff and also upon the custom-house, where I left a small guard, and after a rapid march through the town reached the depot, where I found troops of the United States in possession; these troops had advanced by land from Washington, and were under command of Colonel Wilcox. I stated to him the substance of the above report subsequently, as Colonel Wilcox called on board this ship for a better explanation of our position. It is proper to state that your order to me was simply "to demand the surrender of the town."

Any misunderstanding which the rebels may have had was owing to their excited condition, and exhibited by the rapidity in which they evacuated, not even waiting for the time for which they stipulated. The spirit of my language was intended to apply only for the "protection of helpless women and children," and I so distinctly stated to Major Jewett.

In passing to and from the interview with Major Jewett, I observed small bodies of men in marching order hastening out of the town.

I am, respectfully, your obedient servant,

R. B. LOWRY, *Lieutenant U. S. Navy.*

To Commander S. C. ROWAN,

commanding U. S. Steam Sloop Pawnee.

These reports present, it is true, no very important achievement; they only show what accurate history should record, that the officers of the Potomac flotilla were with their ships where they should have been, at the post of duty, and even took the initiative in a work which, though small in itself, created at the time a profound sensation on account of the death of the lamented Ellsworth, and because it was the advance of the movement into Virginia.

It has been said, that if Commander Rowan had not sent his boat on shore, the rebel troops in Alexandria would have been captured; but it appears by these letters, that when Lieutenant Lowry returned to his boat, the troops were landing, and that they were in full view of the city before the boat left the Pawnee.

As this was an Army expedition in which the Navy was expected to coöperate, the commander of the Pawnee had probably no authority to demand the surrender; but, as has been stated, the Pawnee had been lying off Alexandria for some time, and what orders he had received, or what relation he sustained to the expedition from the navy-yard, the records do not show.

As a matter of course, the few vessels which at first could be spared for service on the Potomac, and mounting as they did in the beginning of the contest, no guns heavier than 32-pounders, and with no coöperating land force, could do no more than hold in check such batteries as the rebels constructed on shore, so as to prevent transports with troops and stores from being destroyed. If they engaged and silenced a battery in the day-time, it might be repaired again during the night, and therefore the river service was one of endless activity, watchfulness, and fatigue, while there was almost no possibility of any such result as excites and cheers brave men in the performance of duty.

The danger, the weariness, and the apparent fruitlessness of the work, were like that of the picket and skirmish line on land, in which the glory and the reward by no means equal the labor and the peril.

The Navy Department constantly urged the importance of a cooperating land force, by whose aid the Potomac batteries could at any time have been destroyed; the Secretary of War and the President were anxious to have this national disgrace of the Potomac blockade wiped away; but General McClellan, on one pretence and another, refused to furnish any men, and could not be induced to consent that even four thousand troops should be spared for this purpose from the magnificent Army of the Potomac, which he persistently, and against all remonstrances of the President, kept month after month in disgraceful inaction, instead of aiding the Navy with a small body for which he had no use except to exhibit them in reviews.

Under such circumstances, the service of the Potomac flotilla was probably among the most fatiguing and discouraging of the war. The crews of the vessels spent a great portion of their nights in rowing up and down the river on picket duty, watching for rebel mail-carriers and smugglers, and spies of all kinds; and in the daytime the ships were often aground on the bars and shoals in spite of all precaution. They were in hourly danger of being opened upon by masked batteries, which could be constructed unseen in the thick undergrowth of the shores; their quarters in the little steamers were exceedingly uncomfortable; their prizes were row-boats, and small, worthless river craft used by the rebels in smuggling, in carrying the traitors' mails, and ferrying over the spies which were constantly passing between the rebel capital and armies and their Northern abettors. For their reward, these hard-working, much-enduring men received too often only the complaints of the country that nothing was done, and sneers at the inefficiency of the Navy Department, and especially of the Potomac flotilla.

By the last of May, 1861, the rebels had completed three batteries at the railroad terminus at Aquia Creek, and some other batteries had also been placed on the heights back of the landing. Up to this time, the Government had refrained from any hostile act except the occupation of Alexandria on the 24th

of May. These batteries, as the reports state, were mounted with rifled guns, and the rebels consequently had a great advantage in range over the guns of the ships. On the 29th of May Commander J. H. Ward, in command of the flotilla, engaged these batteries with the Thomas Freeborn, a paddle-wheel steamer of about 250 tons and three guns; the Anacostia, a small screw steamer of about 200 tons; and the Resolute, a little craft of 90 tons and two guns. The largest gun on board this not very formidable squadron was a 32-pounder; the smaller ones were howitzers. On this day the tide was out, and no harm was apparently done on either side.

The reader will readily perceive what probability there was of any important result from these little vessels, armed with 32-pounders and howitzers, in a fight with land batteries armed with rifled cannon. After a fight of two hours, the lower batteries were silenced by the ships, but the men withdrew to the earthworks on the hill and recommenced their fire. These proved to be too high for the elevation of the guns of the flotilla, while the shot from the batteries fell all around the little steamers, and they were hauled out of range. Little damage was done. On the 1st of June a second engagement was had with the same batteries, with somewhat more serious results. The following is the account of the action given by Captain J. H. Ward:

FLOTILLA STEAMER FREEBORN, POTOMAC RIVER, *June 1, 1861.*

SIR: I have the honor to report a renewal of the bombardment at Aquia Creek, commencing at 11.30 A. M., this day, and terminating, from fatigue of the men, the day being very warm and the firing on our side incessant, at 4.30 P. M., making a duration of five hours.

The firing on shore was scarcely as spirited at any time as yesterday. The heights were abandoned, the guns having been transferred apparently to the earthworks at the railroad terminus, in replacement of the battery silenced there by us yesterday.

During the last hour of the engagement only two or three shots were thrown from the shore by a few individuals, seen stealthily now and then to emerge from concealment, and hastily load and fire a single gun. The bulk of the party had left a half hour before, and squads were seen from time to time taking to their heels, along the beach, with a speed and bottom truly commendable for its prudence, and highly

amusing to the seamen. It did not seem advisable to permit so feeble a fire to wear out my men ; I therefore discontinued the engagement.

Several shots came on board of us, causing the vessel to leak badly, and, besides other injuries, crippling the port-wheel, the wrought-iron shaft being gouged by a shot which would have shattered it if of cast iron—a point considered by me in selecting this vessel for purchase.

Fortunately, I have again neither killed nor wounded, though the shot at times fell thick about us, testing the gallantry and steadiness of my people, which I consider of standard proof for any emergency.

I proceed to Washington to repair damages and refill my exhausted magazines. The Pawnee remains below in the mean time, to supply my place in the blockade. Captain Rowan, of that ship, joined me last night, replenishing my exhausted stores, and most gallantly opened the fire this morning, having followed my lead inshore toward the batteries. His ship received numerous wounds, both below and aloft, inflicted by the enemy's shot, appearing from her size, therefore, most easily hit, to be their favorite mark, and was herself often a sheet of flame, owing to the rapidity of her discharges. I have instructed Captain Rowan to report circumstances direct to the Department.

The enemy set fire to the large passenger and freight depot on the end of the long pier as we were approaching, probably to remove it as an obstruction to their aim, but were not permitted to extinguish the flames during the whole five hours' cannonade ; consequently nearly the whole pier was destroyed, only the charred piles remaining above the water to mark its former position.

My gun-carriage endures its continued test admirably. The pivoting arrangement of the after one gave out in the last hour of the action, when the gun was fought on its trucks, which had neither been removed nor in any manner interfered with in the construction. The recoil, however, became severely racking to the vessel ; the gun was served slower and with less accuracy, and with greatly increased awkwardness, as well as fatigue to the men.

Though not assuming to be the proper judge of my own invention, it is possible the officers and men, especially the guns' crews, are competent to speak after the severe cannonade in which we have been engaged, amounting altogether, in the two weeks we are commissioned, to ten hours, nine of it under fire returned upon us with more or less vigor and effect.

More than one hundred shots have fallen aboard and around us, any one of which would have struck a frigate. We had more than a thousand shots discharged at us within range, and we have ourselves

fired upward of three hundred shots and shells, with seventeen hundred pounds of powder. What damage we inflicted remains to be seen. That we have received none not easily repaired is truly remarkable.

The *Anacostia* and *Reliance* were not permitted to come under damaging fire, their support having been necessary to embolden those engaged by given them confidence that, if disabled in the machinery assistance was at hand to drag them out.

I am, sir, very respectfully, your obedient servant,

J. H. WARD,

Commander, Senior Officer on the Potomac.

Hon. GIDEON WELLES, Secretary of the Navy.

The next day the *Pawnee*, Commander S. C. Rowan, was brought to Aquia Creek, and the batteries were once more attacked, and the results are set forth in the following report of Commander Rowan:

UNITED STATES STEAMER PAWNEE, OFF AQUIA CREEK, VA., June 2, 1861.

SIR: In obedience to an order received on the evening of the 31st ultimo, I proceeded immediately to join Captain Ward.

In passing down the river, I was informed by Lieutenant Mygatt, of the steamer *Reliance*, that Captain Ward had gone ten miles below Aquia Creek for the night. I continued down the river, passing the creek about 3 o'clock A. M. of the 1st of June. At 6 o'clock I joined Commodore Ward. At 9 I stood for Aquia Creek, in company with the *Freeborn*, for the purpose of attacking the batteries. We arrived off the creek at 11 o'clock, and at half-past 11 we ran in, the *Freeborn* leading, being of a lighter draught than the *Pawnee*, while this ship kept just outside on her starboard quarter to avoid grounding.

As we ranged up, the enemy set fire to the buildings on the end of the railroad wharf, and then opened his fire, which was promptly returned by us.

Finding my 15-second shell fell short, with all the elevation the ports admitted of, I ranged ahead of the *Freeborn*, and edged in as near as I could, feeling the way with the lead till I got within range of the forts with the 15-second shell, when we opened a heavy fire. I held this position as long as possible, when the ship fell off against our exertions to keep her steady, and it became necessary to round out into the river, and approach a second time on the same tack. Having got the ship nearer than the first position, and as near as was safe, with but two feet of water to spare, and to the northward and westward of the *Free-*

born, we opened a terrible fire from five 9-inch guns. The batteries were twice silenced under the weight of our fire, but resumed again when our fire had ceased. The houses near the fort were destroyed, and the southern end of the bridge set on fire by the shells.

The wind being from the southward, the bridge was destroyed. The enemy's fire was almost exclusively directed at this ship, his rifled shot passing constantly over and around us. This ship was struck nine times during the bombardment, four of the shot in the hull; one of them, passing through the bulwarks, tore up the deck, and was glanced overboard by one of the iron straps. Of the shots that hit the ship above the hull, one passed through the main topsail yard; another shattered the mizzen masthead and topmast, and another passed through the smoke-stack.

The cool and gallant bearing of the officers and crew excited my warmest admiration. Every man of the divisions performed his duties coolly, and promptly, and intelligently, showing the ship in a high state of training to attain this end. I have been ably seconded by the divisional officers, Lieutenant Chaplin and Master Blue; but, above all, by my able executive officer, Lieutenant R.*B. Lowry, whose fine bearing on the occasion was every thing I could wish.

I am happy to inform you that I have no casualties to report. The only scratch was one shot I received on the face from a small splinter.

At 4½ P. M., having expended all my 10-second and 15-second shell, and the thirty-eight rounds of ammunition for the rifled-cannon, and one hundred and fifty-five hollow shot, I hauled off out of range.

I have the honor to be, very respectfully, your obedient servant,
S. C. ROWAN, *Commander.*

Hon. GIDEON WELLES, Secretary of the Navy.

Three days after this the Harriet Lane, Captain John Faunce, attacked the batteries at Pig's Point, in the vicinity of Hampton Roads. The following is his account of the action :

UNITED STATES STEAMER HARRIET LANE, HAMPTON ROADS, June 5, 1861.

SIR: In obedience to orders from General Butler to make "a reconnaissance of Pig's Point and vicinity," etc., I this morning at 4.50 got underway with my ship from off Newport News, and stood toward Craney Island, steaming close in and along the shore. When off Pig's Point I observed, near the beach, a number of men, apparently engaged in transporting guns by means of ox-teams and wheel-carriages, while others were seen near the embrasures of the battery with the secession flag flying over them. At 8.30 A. M. approached as close to the battery

as the flats would allow, a distance of about eight hundred yards, and opened fire, which was promptly returned by the rebels from, I judge, seven guns, four of which were either 42 or 32-pounders, and the others appeared to be 24-pound howitzers. Two of the shot took effect on the vessel—one passing through the plank-sheer, forward of the fore rigging on port side, and out through the starboard bulwarks; the other, through the fore rigging, grazing the foremast. Several of their heavy shot passed over the vessel and struck some distance beyond. The shells from their howitzers all fell short. Thirty rounds of shot and shells were thrown by us, nearly all of which fell short; some few, however, were observed to strike within the embrasures. The rebels fired about fifty shot and shell.

Having accomplished my object of drawing the fire of the enemy, and thereby discovering the strength of their battery, and finding the range of my guns less than theirs, after an engagement of forty-five minutes I drew off out of range.

From the enclosed report of the surgeon you will perceive that five of our men were wounded. It affords me much pleasure to bear testimony to the gallant conduct of the officers and men under my command.

Respectfully submitted,

JOHN FAUNCE, *Captain.*

Flag-Officer G. M. PENDERGRAST,
commanding West India Squadron,
Flag-Ship Cumberland, off Fortress Monroe, Virginia.

On the 27th of June that unfortunate affair occurred at Matthias Point in which the much-lamented Commander Ward lost his life, of which the following are the official reports:

UNITED STATES STEAMER PAWNEE, POTOMAC RIVER, *June 27, 1861.*

SIR: About sundown, the evening of the 26th instant, while at anchor off Aquia creek, I received an order from Commander Ward (a copy of which is herewith enclosed) to send him two boats armed and equipped, in command of Lieutenant Chaplin. This order was immediately complied with in all its details, and the party left the ship in tow of the Resolute at 9 o'clock A. M. To-day, about noon, the Resolute returned, with a request from Captain Ward that I should send her back if I had no more important service for her. I immediately dispatched the Reliance to Captain Ward, knowing the danger to which our people would be exposed if he contemplated a landing at Matthias Point, as I feared was his intention, judging from the nature of the order he gave

me, to furnish him with such equipments as were necessary to cut down the trees on the point and burn them.

At 9 o'clock this morning the Freeborn and Reliance came up, having been repulsed by the rebels at Matthias Point, in which Lieutenant Chaplain and his command escaped utter destruction by a miracle.

It becomes my painful duty to announce to the Department the death of Commander J. H. Ward, of the Freeborn. He was shot in the abdomen while in the act of sighting his bow gun.

I beg leave to call the attention of the Department to the gallantry, coolness, and presence of mind of Lieutenant Chaplin, of the Pawnee, commanding the party on shore. He remained steady and cool amongst a perfect hail of musketry from hundreds of men, while he collected his own people and made good his retreat without leaving the enemy a trophy beyond a few sand-bags and some axes, and, so far as I can ascertain, the muskets of the wounded men. The last man left the shore with him, and, not being able to swim to the boat with his musket, Lieutenant Chaplain took him on his shoulders, musket and all, and safely reached the boat without a scratch, save a musket-hole through the top of his cap.

In consequence of the want of ordinary comforts in the Freeborn for wounded men, I brought the two wounded men belonging to that vessel with those two of this ship, with the remains of the late Commander J. H. Ward, to the navy-yard, Washington, where now I await orders.

I must also call the attention of the Department to the bravery of John Williams, captain maintop, of the Pawnee, who told his men, while lying off in the boat, that every man must die on his thwart sooner than leave a man behind; and when the flag-staff of his boat was shot away, and the ensign fell, he (although suffering from a gunshot wound in the thigh) seized it in his hand and bravely waved it over his head.

A copy of the surgeon's report of casualties is herewith enclosed. The wounded have been removed to the hospital. I also enclose copies of orders addressed to Lieutenant Lowry.

Lieutenant Chaplin's report of the affair is not yet ready. When it is presented, I shall forward a copy for the information of the Department.

I have the honor to be, very respectfully, your obedient servant,

S. C. ROWAN,

Commander and Senior Officer of the Potomac.

Hon. GIDEON WELLES,

Secretary of the Navy, Washington, D. C.

The following order from the lamented Ward, probably the last he ever wrote, will explain, in part, the nature of the expedition :

FLOTILLA STEAMER FREEBORN, LOWER POTOMAC, June 26, 1861.

SIR : On receipt of this order you will be pleased to send your second launch, by which I mean your second-sized boat, also your smallest boat, not estimating your gig, which need not be sent, with their crews armed with muskets having bayonets, or, if without bayonets, their cutlass with each musket, and a suitable amount of ammunition, also provisions for three or four days, in charge of Lieutenant Chaplin, down to Nanjemoy, alongside the schooner Dana there, and await my arrival in the Freeborn, when Lieutenant Chaplin will report to me with the boats so armed and provisioned.

You will further be pleased to send in the boats all the tar you have on board the Pawnee, a gallon of spirits of turpentine in a can, all the shovels, and all the coal-bags you have except twelve retained to handle coal with ; all the oakum you have, not exceeding one bale in quantity ; a quantity of old canvas, all you can possibly spare, and your gunner's dark-lantern. Send also every axe and hatchet you have, except the corks. The launch and boat you will see are provided with their kedges, and all other expeditionary outfits as prescribed in the Ordinance Regulations, including howitzer for the large boat, if you have two, and one is fitted to sail-boat.

You will, whilst your boat expedition ordered down to Nanjemoy is serving as I intended at Matthias Point, let the Reliance visit me at least once every day or oftener, if convenient with other duties you may need her for.

I am, sir, respectfully,

J. H. WARD, *Commander U. S. N.,
commanding Flotilla of the Potomac River.*

Commander S. C. ROWAN, *U. S. Navy,
commanding U. S. Steamer Pawnee, Potomac River.*

The object was to cut the undergrowth and trees from Matthias Point and burn the brush, in order to destroy the cover from which the rebels fired into passing vessels, while they were themselves unseen.

As the event proved, it was an unfortunate undertaking ; but all criticism is disarmed by the fact that he who planned it sacrificed his own life with that of others, and that he was a brave and enterprising officer. It shows also in a very clear light the harassing and very perilous nature of the work which

these brave men were called upon to perform. The shores of the Potomac were almost one continuous ambush, from whence fire was opened upon every vessel which came within gunshot; and as Matthias Point was one of the principal lurking-places for these river highwaymen, and it was daily expected that the secessionists would erect powerful batteries under cover of the thickets, by which the river might be closed, Commander Ward thought to prevent this by stripping the point of its trees and undergrowth. The result was a surprise and a bloody repulse.

On the 16th of August this point was the scene of a very similar sacrifice of life, as will be seen by the following reports:

UNITED STATES STEAMER YANKEE, OFF AQUIA CREEK, *August 15, 1861.*

SIR: This morning at about 11 o'clock I dispatched the steamers Resolute and Reliance to make a reconnoissance of Matthias Point. At about 3 P. M. the Resolute, Acting Master Budd, returned to this anchorage, and made this report, which is herewith enclosed.

I have ordered Mr. Budd to proceed with his dead and wounded to the navy-yard. Very respectfully, your obedient servant,

THOMAS T. CRAVEN, *Commander,*
commanding Potomac Flotilla.

Hon. GIDEON WELLES, Secretary of the Navy, Washington.

UNITED STATES STEAMER RESOLUTE, *August 16, 1861.*

SIR: In obedience to your order, I proceeded down the river to make an examination of Matthias Point and the immediate vicinity. Nothing indicating a hostile movement could be discovered at or about the point. Hearing that a schooner was ashore at Lower Cedar Point, I thought it advisable to go down to her and get her off if possible. A boat was seen on the Virginia shore, a short distance this side of Persimmon Point, and I dispatched an officer and five men in a boat to capture her. They had just reached her and were in the act of making fast, when a volley of musketry was fired from the adjoining bushes, not more than five or six yards distant, instantly killing three of the boat's crew and wounding another.

I immediately opened fire, throwing shell into the cover that sheltered the enemy. After four or five rounds they were driven out, running in parties of three and four in different directions, some of them running into some dwelling-houses on the right. The survivors of the

boat's crew succeeded in getting her off from the shore while I was firing. The *Reliance* coming up at this moment, commenced firing shell at the flying enemy, and also sent a boat to assist in getting my boat off. Nothing was left behind. My boat is completely riddled, particularly in the after part. The attacking party numbered about thirty, Lieutenant Mygatt remained with his vessel in the vicinity until I could report to you.

The following persons were killed and wounded: Killed—John Fuller, master's mate; George Seymour, seaman; Thomas Tully, seaman. Wounded—Ernest Walton, seaman.

The men that escaped state that the boat on shore had two casks in her; we were unable to secure her. Very respectfully,

WILLIAM BUDD, *commanding Resolute.*

Captain CRAVEN, commanding Potomac Flotilla.

Dangerous, and apparently fruitless for good as these little expeditions were, they were, nevertheless, necessary parts of the service. Such insignificant boats as these men endeavored to capture were actively employed in every work of mischief of which they were capable, and it was important that every one, if possible, should be destroyed. Not one of them but was engaged in carrying intelligence or supplies, or both.

On the 11th of October the commander of the steamer *Union*, Lieutenant A. D. Harrill, was informed that a large schooner was lying in Quantico Creek, and that a large number of troops were collected there for the purpose of crossing the Potomac, and he determined to make an attempt to destroy her. Accordingly, he manned three boats at half-past two in the morning, and, under cover of the darkness, proceeded silently toward the mouth of the creek. The entrance to the creek is quite narrow, and some difficulty was experienced in finding it. Once in the creek, they pulled quietly along within pistol-shot of the shore, until they discovered the schooner. She was guarded by a single sentry, who fled as they drew near, and spread the alarm in the neighboring camp. They sprang on board and hastily collected whatever combustible matter they could find, including a new set of sails and furniture in the cabin, and set her on fire. The conflagration spread rapidly, and it soon lighted up the creek and shores, revealing the position and course of the retreating boats, and a rapid fire was

opened on them from both banks. The glare of the burning schooner, the reflection on the water, the flash of musketry from the shores and the boats, and the occasional flash and boom of a big gun from the steamers, made a wild, exciting night scene, attended with no casualties to mar the success, although the garments of the men and the boats showed many a shot-hole. The schooner was entirely consumed, and soon darkness and silence succeeded to the glare and flash and shoutings of the fight. Another secessionist channel of communication had been cut off.

On the Potomac the secessionists made their first experiments with the torpedo, a weapon which they afterward used so extensively, and sometimes with fatal effect. Considering the vast amount of labor which they expended on these machines, the variety and number of them, the untiring zeal and ingenuity displayed, it is almost miraculous that so few of our vessels were injured. They may be considered as pioneers in a method of warfare which will hereafter be studied by all, and which, in the opinion of many, is likely to prove more effective than all others for the defence of rivers and harbors.

On the 8th of July, 1861, as the Pawnee was lying not far from Aquia Creek, two large casks were discovered floating down the river, and passing about two hundred yards from the ship. A boat was sent out to secure and examine it. Holes had been bored in the tops of the casks, suggesting the idea of supplying air to the fuse within. Water was immediately poured into these holes, and then the machine was towed where it could be examined. It was formed by connecting two eighty-gallon oil-casks with about twenty-five fathoms of manila-rope, the line being buoyed up by cork floats. Underneath each cask, and about six feet below, was slung a torpedo made of boiler-iron, four feet six inches long and about eighteen inches in diameter, and filled with powder. On the top of each cask was a wooden box prepared to secure a fuse leading into the cask. Through the centre of this cask, horizontally, ran a platform on which the fuse was coiled, and then it passed downward through water-tight tubes to the torpedo below. The intention evidently was to start the machine in such a manner that the connecting rope would strike the cable of a ship, and

thus swing the corks around under her bows, where, the fuses having been lighted at starting, in due time the torpedoes would explode. It was found on examination that the fuses had been on fire; but whether they had gone out of themselves, or had been extinguished by the water poured into the casks, is not known. Could the torpedoes have been exploded at the suitable time and place, doubtless they would have destroyed a vessel; but considering how few the chances were that this would take place, it appeared like the bungling experiment of men little acquainted with mechanical contrivances.

In all this river-work there was abundance of toil by night and day, of all forms of exposure to death by disease and by shot, of discomfort and hard fare, but very little of profit or glory. The public saw no result, and therefore bestowed no praises. The value of this service, however, will appear, if we remember that the Potomac and the connected waters formed the great channel of communication between the secessionists and their Northern supporters; that in every creek and little bay, and in all possible places of concealment, spies and smugglers were watching night and day for their opportunity, and that these people were carrying to the traitors exactly that which they needed most—goods, medicines, percussion caps, and other light munitions of war which females could conceal in their dresses, or which could be transported in small row-boats; and that well-filled mails of the secessionists and Northern accomplices were constantly crossing, or spies were attempting to cross with them. In spite of all vigilance, this intercourse could not be entirely prevented, but it was so far interrupted that Virginia felt very severely the pressure of this river blockade. The amount of supplies through this source was largely diminished, spies were arrested, smugglers with their vessels were seized, boats were destroyed, letters and entire mails were interrupted. Finally, the secessionists, notwithstanding the success of their efforts hitherto, finding that they could neither close the river against the Government nor keep it open for their friends, abandoned their batteries and retired from the line of the river. This, however, was not done until 1862. The giving up of the batteries, although it diminished the peril somewhat of this service, did not lessen the fatigue or the gen-

eral exposure. The necessity of patrolling the river day and night by constant watchfulness continued during the most of the war.

Nearly all that the public in general knows of war are the accounts of the principal battles. These are the luminous points which conceal all else; and generally in the bright picture of victory one figure only, that of the successful chief, occupies the foreground; and little is known or thought of the workers and sufferers in such a fight except of a confused mass of men, so many killed, so many wounded, so many yet alive. Few indeed think of all the wearying preparations for such a battle; the exhausting march, the comfortless bivouac, the perilous picket and skirmish lines, the wasting toil and watchings in the trenches, in the camp and field, without which a successful battle is not even possible: nor, while the glare of victory dazzles and blinds to all else, do they dwell much on the thousands who, to secure this glory, yielded to the deadly miasma or exposure, and gave up their young lives in hospitals—their last thought on the homes of their childhood.

For similar reasons the country will never fully know, and therefore will never properly appreciate the labors of the subordinate officers and seamen, who, by constant toil, suffering, and exposure, made possible the great successes whose brilliancy blinds the eye to all lesser achievements. The officers and seamen, whose names have seldom if ever been heard of, who passed sleepless nights and vigilant days on the long line of the blockade, preventing the secessionists from obtaining those supplies, by the want of which they were finally exhausted, these men and their labors made victory certain in the end. Let our successful leaders enjoy their well-earned renown and rewards; but the country should not forget those who, without fame or any adequate reward, bore cheerfully the hardships of the humbler but necessary service.

So it is also with the officers and men to whom was intrusted the very important but by no means brilliant task of guarding and searching the Potomac and other Southern rivers. The little steamers which alone were suited to the work were too contracted to admit of any comfort even for the well, while the sick and wounded absolutely suffered from the lack of proper

accommodation, and they were so slightly built as to afford almost no protection against shot. Every day brought nearly the same monotonous scene and task, and the only new thing which they might expect a day would bring was, that they might be fired into from an ambush, or blown up by a torpedo. Rowing guard at night amid swarms of millions of insects; breathing miasma almost certain to bring on disease; ploughing over or sticking fast upon the soft bars and flats; creeping up and down the tortuous channels of muddy creeks, with ever and anon rifle-balls whizzing out from the tall grass or thickets; rounding a point to find themselves close upon a battery just unmasked, the channel too narrow to turn in, and the propeller forbidding all sternway—at the same time men half hidden on shore evidently trying to explode a torpedo—these were the common incidents, the every day and night work of a service of which the country has known but little.

Insignificant as it seemed to the casual observer, it was a work which the Government could by no means dispense with. It interfered continually with the secession operations, prevented the execution of many a well-laid plot, aided in exhausting the enemy by cutting off supplies, prevented the disclosure of the plans of the Government, convoyed troops and supplies; and when the operations against Richmond by way of the Peninsula were begun, the work of this little flotilla became more important and more arduous still, as will appear as the story of the war goes on.

CHAPTER XX.

FIRST IMPORTANT NAVAL EXPEDITION—CAPTURE OF THE HATTERAS FORTS.

IN the latter part of August, 1861, the secessionists held one unbroken line of defence from just below Alexandria on the Potomac, down that river to its mouth, thence to Norfolk, then southward to Florida, thence along the Gulf to the mouth of the Mississippi, then up that river to Columbus, a few miles below Cairo. The Cumberland and Tennessee were also guarded by Forts Henry and Donelson, so as to prevent any advance into Kentucky and Tennessee. Strong positions in Kentucky were fortified, East Tennessee was occupied, while the main army of the secessionists confronted the North in Virginia and menaced the capital. At the same time the spirit and courage of the country began to call for action on the part of the Army of the Potomac, which originally consisting of raw volunteers, had been disciplined and equipped to a condition of veterans, and subsequently proved itself to be in every way worthy to be intrusted with the preservation of its country's honor.

It was thought quite time for the Government to begin to execute the purpose which Mr. Lincoln boldly avowed at his inauguration—to repossess himself, in the name of the country, of the forts and harbors which the secessionists had seized. In order to observe all due precaution, and to secure success, a board had been convened under the auspices of the Navy Department as early as June, consisting of Captain Samuel F. Du Pont and Charles H. Davis of the Navy, Major John G. Barnard of the Army, and Professor Alexander Bache of the Coast Survey, who were instructed to make a thorough investigation

of the coast and harbors, their defences, and the means by which they could be approached. The Department could not well have chosen a measure which would have shown more clearly its caution and the careful preparation of its measures.

These officers had at command all the charts, plans, and statements of the "Coast Survey," and, guided by these, they presented several elaborate and valuable reports, which enabled the Department to decide upon a definite plan of operations for obtaining possession of the Southern ports and coast. The officers composing this board were eminently qualified for the work committed to them. None knew better than they the peculiar topography and hydrography of the Southern coast line, and, therefore, they were qualified to judge of the points toward which an attack should be directed. The secessionists had indicated their own opinions of the strategic points by the location of their forts. Two of the most important of these were established at Hatteras Inlet, and against these the first important naval expedition was directed.

At the commencement of the war very few had any particular and accurate knowledge of the hydrography and topography of the Southern coast. Most had only such a general idea of it as they had of the coast of France, or Spain, or Africa; and when the country read the account of the bombardment of the forts on the barren, shifting sands of Hatteras, it is not surprising that many should have thought it an uncalled-for and fruitless expedition, and that the Department had undertaken to make much out of little in its published reports of the battle. Had they known the character of the men under whose advice the attack was planned, and the reasons which induced the Department to undertake the work, very different opinions would have been formed of the plan, and its execution would have received the proper praise. The case may be illustrated by a supposition easily understood. If the position of the two parties in the war had been reversed, and a Southern navy had attempted to blockade the coast of the North, and the North had held possession of Long Island Sound, the Hudson River, the bays of New Jersey, and the bays at the east end of the sound, and the entrances to the ocean from these were

guarded by suitable forts, all can see that it would have been very difficult to cut us off from obtaining sufficient supplies, while our internal trade would not have been in any manner interrupted. If, then, an expedition had been fitted out to capture the forts, either at the Narrows or at the eastern end of the sound (supposing that could be fortified), all can easily see that such an expedition would have been a very important one. To apply this illustration, let any one turn to the map of North Carolina and observe the network of sounds, bays, and navigable rivers which cover the eastern part of that State, and also the connecting railroads leading into the interior and joining the great trunk lines of the South.

It will be seen that there are in Pamlico and Albemarle Sounds, and the connected waters, more internal navigation than is afforded by Long Island Sound and its rivers. The Neuse, the Chowan, and the Roanoke supply channels leading far into the country, and, at suitable points, railroads branch off to the main routes, while the Dismal Swamp Canal afforded a communication with Norfolk. There were numerous channels between these sounds and the ocean, inlets running across the narrow coast-line, and through which small vessels could pass without much fear of discovery, where a blockader could not follow, because of shallow water; while the main channel, through which our vessels might enter the sounds, was guarded by the Hatteras forts. Once safe within the sounds, the rebel traders had the whole country open to their operations.

There are many facts which indicate but too plainly that Europe, and especially England, was fully instructed beforehand in regard to the coming rebellion, and that the question how she could most effectually aid the secessionists, in order to cripple the Republic and enrich herself, had been carefully studied in all its aspects. Her plans were precisely such as secret hostility would naturally devise, with too little regard for justice or national comity. She declared the conspirators belligerents, and the ink of the proclamation was not dry before privateers were being fitted out in her yards, by which our commerce was to be driven into British bottoms or our ships destroyed.

The nature of the Southern coast seems to have been fully

explained in England, and she had almost at once a fleet of blockade-runners exactly fitted to hover in the shallow waters, and thread the small inlets, where our heavy ships could not follow; and by them she expected to supply the enemy with whatever was needed, and receive their cotton in return. Her success at first was gratifying. The main inlets, as has been stated, were guarded by forts, and through these and every smaller one—through which only the light blockade-runner could pass—these English smugglers glided, laden one way with the produce of the British workshops, and the other with cotton.

In this manner they supplied the enemy with thousands of rifled muskets, with the best rifled cannon which England could produce, with sabres and every description of equipments for cavalry, with gunpowder, with cartridges, with percussion caps, with plates for iron-clad ships, with army hats, blankets, boots and shoes, and with every description of goods for common family use, so that the South was virtually a province hired by England and furnished by her to carry on war against the United States. They were in the employ of the British Government as practically, except in name, as were the Hessians which she sent here during the war of the Revolution.

There were two points on the coast of North Carolina toward which this hostile traffic was directed. One was Wilmington, and the other the various entrances to Pamlico and Albemarle Sounds. Upon these points the rebels depended more than upon Charleston, Savannah, and Mobile for their supplies for the Army of Virginia. Supplies entering at these points were easily distributed by the various railroads and along the rivers, which were navigable for small craft far into the interior. At first, the importance of this traffic was not fully understood. Naturally the mind turned toward Charleston, Savannah, and Mobile, as the main points where the smugglers would attempt to enter, and the topography of the more northern coast was not particularly known. Wilmington had been an unimportant city, and not many Northern vessels were in the habit of visiting the sounds.

It was not, therefore, until the board of officers already mentioned had made their report that the Department was made fully acquainted with the great importance of the forts at

Hatteras Inlet. In consequence of this report, and under the advice of these officers, a squadron was fitted out and placed under the command of Commodore Stringham. On the 26th August, 1861, this first important fleet of the war sailed from Hampton Roads. The following ships composed this squadron :

	Guns.
Minnesota, Captain G. J. Van Brunt (flag-ship)	46
Wabash, Captain Samuel Mercer	45
Monticello, Commander J. P. Gillis	6
Susquehanna, Captain J. Chauncey	17
Pawnee, Commander S. C. Rowan	15
Harriet Lane, Captain John Faunce	5
Cumberland, Captain Marston	24
	—
	158

United States chartered steamers Adelaide, Commander H. S. Stellwagen ; George Peabody, Lieutenant R. R. Lowry ; tug Fanny, Lieutenant Pierce Crosby. In addition to these, some schooners and surf-boats were towed by the steamers.

On board the transports was a body of troops (about 900) under the command of Major-General Butler. The forts against which the squadron was sent are situated upon Hatteras Island and command the main inlet to the sounds. A brief description of the island and the forts is necessary to a proper understanding of the conflict of which they were the theatre.

Beginning at Hatteras Inlet, the island runs in a northeasterly direction about thirteen miles to Hatteras light-house. Here it turns almost at a right angle northward, and extends twenty-seven miles farther to Loggerhead Inlet, making its whole length about forty miles. At this northern point of the island is Chicamacomico, a spot which became somewhat important in the operations of our forces. The average width of this island is about one mile. At some points it is probably two miles wide, while at other places it is not more than one-third of a mile in breadth. It is mostly a strip of barren sand. Here and there are scattered clumps of dwarf oaks, and then a few little marshes covered with coarse marsh-grass. The rest is composed of bare sand-heaps, at one time wet with the waves and the spray, at others glaring in the sun and drifting with the winds. Besides the dwarf oaks and patches of marsh-grass

there is nothing green, nothing that indicates cultivation, or the presence of civilized life. The population at the beginning of the war was said to be about five hundred. Fishing, oystering, piloting, wrecking, make the sum of their industrial pursuits, a race of beings mostly born on the island, and knowing very little of the world beyond their sand-spit home. A portion of these people, to their honor be it remembered, were loyal to their Government, and were driven from their homes in consequence by the rebel troops.

Forts Clark and Hatteras are situated on the extreme southwestern point of Hatteras Island, with a shallow bay of water about half a mile wide between them. Fort Clark, the smaller work, was merely a square redoubt, or water battery, with its guns bearing upon the northern approach to the inlet from the ocean; while the larger fort, Hatteras, defended the inlet itself, and at the same time covered the smaller water battery with a part of its guns. These works were constructed by the rebels in the summer of 1861, and were laid out and finished with much skill and at considerable expense, under the direction of Colonel William B. Thompson, of Virginia. The works were not entirely completed when attacked, some of the heavy guns in Fort Hatteras not having been mounted. Fort Hatteras covered an area of between one and two acres, and was provided with a bomb-proof, which, however, was not sufficient protection against our heavy shells. The forts were so situated that the attack was to be made, not from the inlet, but from the open sea to the southeast, and the direction of the fire of the ships was to the north and northwest, both forts being in the line of fire, but the battery Clark being half a mile nearer than the larger work.

It was to be the first important experiment of the war in engaging earthworks with ships, and the result was awaited with no small anxiety by those who had planned the expedition. In the afternoon of the 26th, the squadron passed Cape Henry, and the pilot of the flag-ship Minnesota was discharged. On the morning of the 27th, at 9.30 A. M., Cape Hatteras light was in sight, the ships encountering a heavy ground-swell. The squadron rounded the shoals off Hatteras, and at 5 P. M. anchored at the southward of the cape. During the evening the

surf-boats were hoisted, and all preparations were made for landing troops in the morning.

On Wednesday morning the wind was blowing fresh from the south, and the long lines of foam showed that a heavy surf was rolling on the beach, which might make the landing of the troops a somewhat difficult and perilous operation. The men, however, were called at 4 A. M., and they partook of an early breakfast. The marines of the Minnesota, under the command of Captain William L. Shuttleworth, were sent on board the Harriet Lane, accompanied by Major-General Butler. At 6.40 A. M., all being ready, the signal was made to disembark the troops, and the Pawnee, Harriet Lane, and Monticello were ordered to cover and assist in landing them.

From the inlet to Hatteras light-house, a distance of about thirteen miles, the surf rolls in continually, and in almost unbroken lines of foam, varying only as it is more or less fearful according to the state of the weather, and to land through this is at all times a difficult and dangerous work—a task which it was necessary for the troops to undertake. The point selected for the attempt was about three miles from the inlet. The surf at the time was very high, and it was evident that the landing would be attended with extreme danger. Iron surf-boats had been provided for this work, each of which was intended to carry about one company of soldiers. Two dismasted schooners which had been brought down for the purpose were filled with men, towed as near as possible to the shore, and there anchored. From these they were embarked on the iron surf-boats and the boats of the squadron, to the number of three hundred. When they entered the surf it was only with the utmost difficulty that they were kept from capsizing, and they were hurled on the beach, the waves sweeping over them, and the men struggling through the water waist-deep to shore. One boat, a cutter from the Pawnee, landed safely, and returned for another load of soldiers, but on entering the surf a second time it was swamped, and all on board very narrowly escaped drowning. It was found impossible to get the surf-boats out again, and they were swamped and crushed by the surf. No further attempts were made at landing the troops, and this left about three hundred of our men on shore in a most uncomfortable and perilous

condition. They had taken with them two howitzers, but the carriage of one had been damaged in landing so as to render the gun useless, and one rifled howitzer was all they had left for their protection. Much of the ammunition had been wet, and they had brought neither provisions nor water, as it was the intention to send these later in the day. But the sea momentarily became rougher, and ere long, not only had communication with the fleet been cut off, but the ships were compelled to haul off and get an offing in order to pass the night safely. The manner in which the three hundred passed the night will be described hereafter. At 8.45 the Wabash got under way, and, with the Cumberland in tow, led in toward Fort Clark, the Minnesota following them. The heavy frigates were watched with intense interest as they steamed on toward positions within range of the forts, and at 10 A. M. the jets of smoke leaping from every port of the broadside, and the deep roar that came rolling over the waves announced that the fight had begun. Ten minutes later the Minnesota, having passed inside the Wabash, took a position nearer to the forts, and opened upon them her mighty battery. The Susquehanna also gained her allotted place, and added the weight of her broadside.

These vessels passed and repassed Fort Clark, pouring upon it a continuous storm of shot and shell; while the firing of the rebel gunners was wild and irregular, the shot sometimes falling short and again passing quite over the ships. It has been often asked how it was possible that the twenty-five guns of these forts, described as being of heavy calibre, could have been used upon the large ships engaged in this battle for many hours without producing greater effect; and from the little damage done the inference has been that it was really an insignificant affair, magnified in order to glorify the Navy and encourage the country. Especially does it seem remarkable that these huge frigates were not injured, when it is stated that the shot from the forts either fell short or passed over the ships. But the whole is easily explained when the facts are known. Commodore Stringham fought his ships under the peculiar advantages which steam affords, and on the same plan for which such warm praise was bestowed soon after upon Commodore Du Pont at Hilton Head, when he used it on a somewhat larger scale.

Instead of anchoring his ships, in which case the gunners of the forts would soon have obtained their range, he steamed past the enemy's batteries, delivering his fire as he came in range. Of course the motion of the steamers made it more difficult to strike them, but this was not all. The ships did not follow in each other's wake, nor pursue the same path a second time, so that even if the range were right for the headward vessel, it was wrong for the next, because she did not pass at the same distance; and when the fleet passed the second time, all the distances were different from what they were at first, and so every shot from the fort was really an experimental one, a mere trial-shot, and this accounts for the fact, stated in the report, that the shot from the fort either fell short or passed over the ships.

So far as is known, this was the first trial in our Navy of this movement, and the honor of introducing it belongs to Commodore Stringham. The little that was known of the real character of the Hatteras expedition prevented the public from paying any attention to the commodore's strategy, but when it was repeated soon after by Commodore Du Pont in a more brilliant affair, its merit was duly recognized. This scientific officer saw its advantages, and for the splendid use which he made of it deserved the praise which he received.

Nine-inch, 10-inch, and 11-inch shells burst over, around, and in the fort so thickly that the gunners could take no steady aim, and were often driven from their guns. At 12.25 p. m. the flags were down on both forts, and the rebels were evidently abandoning Fort Clark. Some were seen running toward Fort Hatteras, and others were leaving the shore in boats. As Fort Clark was evidently abandoned, the signal was made to cease firing at 12.30 p. m. At 1.10 p. m. the troops began to move up the beach toward the fort, and at 2 p. m. the pickets took possession of the deserted battery and hoisted over it the American flag. At 4 o'clock Captain Gillis, of the Monticello, was ordered to feel his way into the inlet and take possession of the fort; but he had advanced only a short distance when Fort Hatteras opened upon him a heavy fire, and at the same time a steam-tug, towing a schooner filled with men for the relief of the forts, were seen approaching from the south. It was found that this was quite a large body of reënforcements, but they

were soon driven back, and the *Minnesota*, *Susquehanna*, and *Pawnee* at once reopened fire upon Fort Hatteras; the *Wabash* having gone to tow the *Cumberland* into the offing, where, being only a sailing vessel, she could be safe, as the weather was looking squally.

The *Monticello*, for a short time, was in an exposed and even dangerous position. She had scarcely entered the inlet when she grounded frequently, striking both bow and stern. It was found that the water was shoaling, the ship could not be worked on account of the narrowness of the channel, and she was likely to get hard aground.

The following report, from Commander John P. Gillis, will show the severity of this portion of the fight :

U. S. STEAMER *MONTICELLO*, OFF HATTERAS INLET, N. C., August 31, 1861.

SIR: I have the honor to report to you that, in obedience to the order of Flag-Officer S. H. Stringham, the transport steamers, with troops on board, were conveyed safely to the position off this inlet indicated by him.

I communicated with the United States ship *Cumberland*; the *Harriet Lane* took her in tow. Boarded schooner *Equator*, from Nassau, with fruit for New York.

On the arrival of the frigates *Minnesota* and *Wabash* (27th), received further instructions from the flag-officer, and proceeded to carry them out. Stood in and made a reconnoissance of the shore, discovering two forts on north side of Hatteras Inlet, and a suitable place for landing troops on the beach about two and a half miles to the north.

On the 28th received the marines from the *Minnesota* and *Wabash*; also a lighter or scow with two howitzers, which we landed, and assisted in landing some of the other troops, about 300 in all, I believe.

The *Minnesota*, *Wabash*, and *Cumberland* took positions and commenced shelling the forts on the point, which promptly returned the fire, and the *Harriet Lane*, *Pawnee*, and *Monticello* covered our troops on shore with their shell. Wind freshening and surf increasing, could not land more troops. Steamed down along the beach, extending our firing to the forts, one of which ceased to fire, and hauled down the Confederate flag. We were feeling our way in through the inlet, when signalled to come alongside of flag-ship; received a pilot for the inlet from flag-ship, and proceeded to attempt the passage, no rebel flag flying on shore; entered between the breakers, feeling our way carefully with the lead for the deepest water. The vessel struck heavily fre-

quently. Continued on, in hopes of getting into deeper water, and be enabled to enter the sound; the large fort, of fifteen guns, still showing no colors, and our own troops in possession of the other, of five guns. As we turned the point or spithead, finding so little water that we would be compelled to turn and work the vessel out again, if possible, the large fort opened a brisk fire upon us, which we promptly returned with our pivot-gun and port battery (two 32-pounders abaft), ship striking often as we backed and filled to turn her head seaward. By keeping the engine in motion we succeeded, with the aid of the swell, in getting out of the inlet, firing five-second shell rapidly and with precision at the battery. We were about fifteen minutes in this "tight place," during which time we fired thirty shell. The fort fired slow as we came out, and did not return our last three shot, owing, no doubt, to the promptness with which the flag-officer and the other vessels opened upon them for our relief.

We were struck by eight-inch shot and shell; once amidships, on port side, shot lodged in knee; another amidships, on port side, which carried away boat-davit, and drove the fragments of shell and davit through the armory, pantry, and galley; another shot carried away part of fore-topsail yard and sail on the port yard-arm; another on the starboard bow. This shot lodged in the knee, at forward end of shell-locker. Another shot amidships, on the starboard side, passed through, across berth-deck, paint-locker, and bulkhead, across fire-room, and lodged in the port coal-bunker, ripping up the deck in the gangway over it; whale-boat's bottom shot away and gig injured. Received carpenters from the flag-ship to make temporary repairs, plug shot-holes, etc., and stood in toward the batteries, firing several guns.

Expended the following ammunition:

17 five-second 10-inch shell.	9 five-second 32-pound shell.
18 ten-second 10-inch shell.	20 ten-second 32-pound shell.
11 fifteen-second 10-inch shell.	11 fifteen-second 32-pound shell.
—	—
46 ten-inch shell.	40 32-pound shell.
	46
	—
	86
Shrapnell.....	3
—	—
Total.....	89

Powder.—46 ten-pound charges, 28 six-pound charges, 15 four-pound charges; total, 89 charges.

I am, very respectfully, your obedient servant,

JOHN P. GILLIS, *Commander.*

Hon. GIDEON WELLES, Secretary of the Navy, Washington.

At 6.15 the signal was made to cease firing, and the squadron hauled off for the night, with the exception of the Monticello, Pawnee, and Harriet Lane; which were ordered to go inshore and protect the troops during the night. The roar of the battle died away as one after another of the ships drew out of range, the fire of Fort Hatteras ceased, and those not partially deafened by the guns heard again the dash of the surf on the sandy beach and a seaward murmur as from a coming storm; while the blows of the carpenters repairing damages on board the Monticello rang out sharply over the waters. The main body of troops remained during the night near where they were landed, with no very pleasant prospects of comfort on that bare sand-spit, with the promise of a squally night.

About three hundred men had been landed in the manner already stated, and were left without food or shelter, or fresh water, or support from the fleet, on a hostile shore, but a short distance from the forts whose garrisons outnumbered them, and with a fleet of light steamers near that could bring other troops for a night attack. In this state of things scouts were sent out to reconnoitre. They brought back the report that Fort Clark was evacuated, the troops having been withdrawn to Fort Hatteras. A small body of the troops thereupon marched up and took possession, hoisting on the ramparts the Union flag. For some unexplained reason the fire from the ships was kept up after the little band had entered Fort Clark, and, as a consequence, they were speedily shelled out again, and that before they could take possession of some commissary stores that the enemy had abandoned, and which the soldiers greatly needed, for they had eaten nothing since 5 o'clock in the morning, and their labors during the day had been severe. They had also been thoroughly drenched, and had marched to the fort in their wet clothing, and were not yet accustomed to the hardships which veteran soldiers are so often called upon to endure. Under such circumstances they were compelled to march back to the place where they had landed, nearly three miles. On their retreat they captured some stragglers from the forts, and from them and some negroes they learned that the rebel forces outnumbered ours, and that they were expecting reinforcements during the night. The prospect was certainly not very encouraging.

The soldiers, however, were disposed to put upon the matter as cheerful a face as possible. They discovered a few sheep and some geese, which, in army phrase, were "appropriated" or "acquired." Camp-fires were lighted, and a process, which they were obliged to regard as cooking, was gone through with. Bayonets and cutlasses made very serviceable spits, and this meat alone, thus cooked, made the only supper, and breakfast also, of men who had been used to the comforts of Northern homes and the luxuries of cities.

They had no tents or shelter of any kind, and the night was rainy. Their garments were yet wet from the drenching of the landing, and so with the wet sand for a bed, with wet clothing for a covering, the rain falling upon them, and the surge lashed by the rising gale howling in their very ears, these weary defenders of our flag tried hard to sleep. During the night, as was afterward known, the enemy were busy throwing troops into Hatteras, and organizing to attack the little band, but their own pickets made a false report that the Union troops in large numbers were advancing to attack the forts, and thus they were held back from an assault in which our troops would probably have been captured. Thus the three hundred passed a safe but watchful and anxious night.

On Thursday morning, the 29th, the weather was pleasant, and the sea not so rough. At 5.30 A. M. the general signal was made, "Prepare to engage batteries." All weighed anchor, stood in toward the shore, and "discovered," says Commodore Stringham, "the main body of our troops near where they landed." A small guard had taken possession of Fort Clark after it had been deserted under the fire of the fleet. The commander of the Monticello was instructed to bring off the troops if they wished to reëmbark, or to supply them with provisions if they desired to remain. At 7.30 the signal to attack was given, with a precaution against firing too near the battery already won. At 8 A. M. the side-wheel steamer *Susquehanna* being ahead opened her broadside upon Fort Hatteras, the *Wabash* followed, and then the *Minnesota*, with their enormous batteries, and soon after the *Cumberland* came in under sail from the offing, and joined again in the fight. The enemy had now five guns less than yesterday, and they used the remainder with very little

effect. Commodore Stringham, observing that some of our shot fell short, signalled to use 15-second fuses only and with 10-inch guns. This change made the firing much more effectual, shot and shell fell thick in and around the fort, and it was enveloped with smoke and clouds of dust. The *Harriet Lane* also came up and joined in the firing with her rifled guns.

During the last day's fight the fire of the ships was very accurate. The range was two miles, and the 15-second fuses exploded the shells at exactly that distance. Considering the heavy batteries of the ships engaged, and the number of their guns, it is not surprising that sometimes three shells would burst at once in the fort. It was almost a matter of course that the garrison became demoralized. They could not stand to their guns, every thing which shot and shells could destroy in the fort was being smashed in pieces, and, in spite of remonstrance or commands, they took refuge in the bomb-proof, leaving their stations at the puff of smoke from the guns of the ships. For the last hour and a half of the bombardment, as stated by the commanding officer of the fort, the shells fell mostly in the centre of his works, and so thickly as to force his men to shelter. At length a shell struck a ventilator in the top of the bomb-proof, and went through, and, though it did not explode, it spread consternation among the three hundred men that were packed within. The shell filled the bomb-proof with dust and smoke, and the men supposing that the magazine was on fire, a great panic ensued, and they were beyond control. Not long after, another exploded on the bomb-proof, and it was quite evident that, not only would it soon be destroyed, but the magazine would itself be exploded. It was deemed folly to protract the defence, and a white flag was run up over the fort, and the victory was won. Prolonged cheers from the fleet rose louder than the roar of the surge, and the firing ceased.

Commodore Barron refused to surrender the forts to the troops who had now come up, the number being so small, and they having taken no part in the battle. He was therefore taken on board the flag-ship, and there he gave up his sword to his former friend, Commodore Stringham. The second day's bombardment continued a little more than three hours.

When the white flag was raised on the fort the troops

marched up, and at 11.30 Major-General Butler, in the tug Fanny, went into the inlet to the rear of the forts to take possession. Three steamers and several schooners with rebel troops on board were in the sound watching the engagement, but they left after the surrender of the fort, the Fanny sending some shot after them from her rifled gun. The chartered steamers, with the remainder of the troops on board, then went into the inlet to land them, and thus ended the first important naval engagement of the war. As the result, possession was obtained of the key to the inland waters of North Carolina, and six hundred and fifteen prisoners were captured, at the head of whom was that Samuel Barron who, a short time before, by an order obtained from President Lincoln, in some unexplained manner, was to have taken the charge of a most important office in the Navy Department, which order was revoked upon the firm remonstrance of Secretary Welles. The presence of this person at these forts is a very instructive commentary upon the wisdom of those who procured from Mr. Lincoln his appointment to a position where he would have known all the intended operations of the Navy, the location of every ship, and the station of every officer, and could therefore have frustrated every movement of the Department. The following are the articles of capitulation as signed off Hatteras Inlet :

OFF HATTERAS INLET,
UNITED STATES FLAG-SHIP MINNESOTA, August 29, A. D. 1861. }

Articles of capitulation between Flag-Officer Stringham, commanding the "Atlantic Blockading Squadron," and Benjamin F. Butler, United States Army, commanding on behalf of the United States Government, and Samuel Barron, commanding the naval force for the defence of North Carolina and Virginia, and Colonel Martin, commanding the forces, and Major Andrews, commanding the same forces, at Fort Hatteras.

It is stipulated and agreed between the contracting parties that the forces under the command of the said Barron, Martin, and Andrews, and all munitions of war, arms, men, and property, under the command of said Barron, Martin, and Andrews, be unconditionally surrendered to the Government of the United States in terms of full capitulation.

And it is stipulated and agreed by the contracting parties on the part of the United States Government that the officers and men shall receive the treatment due to prisoners of war.

In witness whereof, we, the said Stringham and Butler, on behalf of the United States, and the said Barron, Martin, and Andrews, repre-

senting the forces at Hatteras Inlet, hereunto interchangeably set our hands this twenty-ninth day of August; A. D. 1861, and of the independence of the United States the eighty-fifth year.

S. H. STRINGHAM,

Flag-Officer Atlantic Blockading Squadron.

BENJAMIN F. BUTLER,

Major-General United States Army, commanding.

S. BARRON,

Flag-Officer Confederate States Navy,

Commanding Naval Defences South and North Carolina.

WILLIAM F. MARTIN,

Colonel 7th Regiment Infantry North Carolina Volunteers.

W. S. G. ANDREWS,

Major, commanding Forts Hatteras and Clark.

The following papers will show the opinion of Commodore Stringham and of Secretary Welles in regard to the importance of the enterprise :

U. S. FLAG-SHIP MINNESOTA, NEW YORK HARBOR, September 2, 1861.

SIR: I have the honor to enclose to the Department a correct list of the prisoners captured by the Navy at Forts Hatteras and Clark on the 29th day of August, A. D. 1861, amounting to a few more than the number I gave in my dispatch No. 133.

The three senior officers of the enemy surrendered their swords to me on board the Minnesota. Will the Department please inform me what disposition I can make of them?

I am not able to get a correct list of the killed and wounded on the part of the enemy.

I wish in this official manner to renew the opinion which I have heretofore given as to the very great importance to the Government of retaining in our possession the forts at Hatteras. This inlet I consider the key to all the ports south of Hatteras, and only second in importance to Fortress Monroe and Hampton Roads. From all I can learn, it was the intention of the enemy to fortify this point as strongly as possible.

It will be of great service to our fleet in their blockading operations, and most effectually, I trust, put an end to the pirating which has been so successfully carried on there for some time past.

Respectfully, your obedient servant,

S. H. STRINGHAM,

Flag-Officer Atlantic Blockading Squadron.

Hon. GIDEON WELLES, Secretary of the Navy.

NAVY DEPARTMENT, *September 2, 1861.*

SIR: The Department congratulates you and those of your command, and also the officers and soldiers of the army who coöperated with you on the reduction of Forts Hatteras and Clark, and the capture of the forces employed in their defence.

The successful result, thus far, of an expedition projected with great care, and the occupation of the position commanding the most important inlet on the coast of North Carolina will be attended with consequences that can scarcely be overestimated.

This brilliant achievement, accomplished without the loss of a man on your part, or injury to any one in the Federal service, has carried joy and gladness to the bosom of every friend of the Union.

It is, I trust, but the beginning of results that will soon eventuate in suppressing the insurrection, and confirming more strongly than ever the integrity of the Union.

Convey to the officers and men of the respective vessels under your command the thanks of the Department for their gallant conduct, and the assurance that is thus afforded that, in the great emergency now upon us, the country may rely, as of old, upon the vigor the courage, and the enthusiasm of its brave officers and sailors.

I am, respectfully, your obedient servant,

GIDEON WELLES.

Flag-Officer S. H. STRINGHAM,

Commanding Atlantic Blockading Squadron.

This was really the first important success of the war, the first event which revived the drooping spirits of the country after the capture of Sumter and the disgrace of Bull Run. It was not remarkable for the character of the fighting, though our ships and their batteries were skilfully handled, and officers and men performed their duties nobly. The rebel forts, though mounting twenty-five guns, effected little, except when the Monticello was for a short time aground and unmanageable in the inlet, because of the manner in which the ships were managed, and because they were overwhelmed by the shot and shell from the ships. The important feature of the victory was, that a foothold was gained upon the Southern coast which afforded a point of support for our blockading squadrons; that it gave us command of the most important passage to the sounds on the coast of North Carolina, and prevented the entrance of English

smugglers, while it also stopped to a great extent the fitting out of piratical expeditions on those interior waters.

The capture of the Hatteras forts was soon followed by other operations along the coast and sounds, which were intended both to weaken the defences of the enemy, and to extend and secure our control of the adjacent coast and waters. The first of these was directed against Fort Ocracoke. Ocracoke Inlet is some twenty miles south of Hatteras. Just inside of the inlet is a small island called Beacon Island. On the seaward face of this island, and so placed as to command the inlet, the rebels had constructed a fort intended to mount twenty guns. At Portsmouth, a small village on a point near by, four 8-inch guns had also been placed, with the intention of constructing a battery which would also command the channel of the inlet. The capture of the Hatteras forts interrupted the rebel plans, and they were compelled to evacuate both these points, and it was thought important to fit out an expedition to destroy the guns and other material, in order to prevent these points from being reoccupied. The following is the official report of this operation :

U. S. STEAMER PAWNEE, HATTERAS INLET, *September 18, 1861.*

SIR: On Saturday, the 14th instant, I gave a pass to one of the people on Hatteras Island to go to Ocracoke Inlet for the purpose of bringing his family from Portsmouth. I directed this person to examine the forts on Beacon Island and Portsmouth Island, and bring me a true report of the condition of things; the number of guns mounted, if any, and the number dismounted; whether any troops were there, and whether the gun-carriages had all been burnt or not, and to report the result to me on his return.

On Sunday morning, the 15th instant, the boat came alongside with the man and his wife and children in a destitute state. We gave them food, and the surgeon prescribed and furnished medicine for the sick of the family.

The man reported that there were twenty guns in Fort Beacon and four 8-inch shell guns at Portsmouth; that the guns were spiked and the carriages burnt on the 1st instant, as already reported to you.

He also stated that a steamer came to Beacon Island, before he left Portsmouth, for the purpose of carrying off the guns.

I immediately determined to use all the means at my command to prevent the removal of the guns, and forthwith got the steamer *Fanny*

alongside to prepare her for this service, and had the launch armed and equipped. I sent a request to Colonel Hawkins to give me as many of the naval brigade as could be spared, which he cheerfully complied with. When the *Fanny* was brought alongside, her iron rudder-perch was found so much injured that it would be impossible to send her without repairs, and so the forge was gotten up, and the clink of the hammers soon succeeded the voices of the crew in their responses to our usual Sunday morning service.

I dispatched the information to Captain Chauncey, in the offing, who promptly informed me that he would send in four boats and all his marines. I sent him word that I would have great pleasure in coöperating with him as senior officer, and would send him the *Tempest* to tow his boats over Ocracoke bar.

At daylight on Monday morning the *Fanny* was towed alongside, and her rudder temporarily fitted; the naval brigade were taken on board with four days' provision and water, and the launch similarly provided for.

The expedition being carefully organized and provided with sledge-hammers to break off the trunnions, and 32-pounder shot and twenty 7-pound cartridges to be used in firing one gun against the trunnion of another, left this ship at half-past seven o'clock. The launch commanded by Lieutenant Eastman, in tow of the *Fanny*; the expedition under command of Lieutenant Maxwell, the executive officer of this ship.

I dispatched the tug *Tempest* to Captain Chauncey, she drawing too much water to enter the sound. At 10 o'clock the *Susquehanna* and tug started for the inlet; on the evening of the same day the tug and *Susquehanna* returned and anchored off Fort Clark. The tug came the next morning, and the pilot informed me that the force from the *Susquehanna* did not enter Ocracoke in consequence of the surf.

On the afternoon of the 17th instant I felt much anxiety for our expedition.

The *Susquehanna* remained at anchor in the offing, and our force was left to take care of itself.

Early this morning the look-out at the masthead gave us the gratifying intelligence that our expedition was in sight, and it reached the ship about 11 o'clock.

Lieutenants Maxwell and Eastman performed the service with ability and energy, and bore my thanks.

The destruction of the fort is complete, and twenty-two guns disabled; these were all the guns that were there, with the exception of

two taken off in the steamboat Albemarle on Sunday. The destruction of the guns was with me a necessity. I had no means of transporting them nor of defending them in their position. I therefore hope my course will meet with your approval.

I enclose a copy of Lieutenant Maxwell's report, giving all the details of this important service, which was performed without an accident of any kind.

I have the honor to be, very respectfully, your obedient servant,

S. C. ROWAN, *Commander.*

Flag-Officer S. H. STRINGHAM, commanding Atlantic Squadron.

U. S. STEAMER PAWNEE, HATTERAS INLET, *September 18, 1861.*

SIR: I have to report that, in compliance with your orders of the 16th, I started for Ocracoke on that day in the steamer Fanny, towing the Pawnee's launch. Lieutenant Eastman had charge of the latter with twenty-two men and six marines from the ship, and the 12-pound howitzer, and I had on board six men and sixty-one soldiers of the naval brigade, under Lieutenants Tillotson and Rowe.

We arrived within two miles of the fort on Beacon Island at 11 A. M., when the Fanny grounded. I sent Lieutenant Eastman in the launch to sound for the channel. While he was so occupied, a sail-boat with two men put off from Portsmouth to cross the sound. A shot from the Fanny brought them alongside, and they piloted us to within a hundred yards of the fort. It is called Fort Ocracoke, and is situated on the seaward face of Beacon Island; it was entirely deserted; it is octagonal in shape, contains four shell-rooms about twenty-five feet square, and in the centre a large bomb-proof one hundred feet square, with the magazine within it. Directly above the magazine, on each side, were four large tanks containing water.

The fort has been constructed with great care of sand in barrels covered with earth and turf; the inner framing of the bomb-proof was built of heavy pine timber. There were platforms for twenty guns, which had been partially destroyed by fire; the gun-carriages had been all burned. There were eighteen guns in the fort, viz.: four 8-inch navy shell-guns and fourteen long 32-pounders.

The steamer Albemarle left on Sunday afternoon, carrying off two guns. I found 150 barrels also, many of them filled with water; there being no water in the fort, they had brought it from Washington and Newbern.

I landed the men at half-past one o'clock, and commenced breaking off the trunnions of the guns. While a portion of our men and the

naval brigade were so employed, I sent Lieutenant Eastman in the launch to Portsmouth, where he found three 8-inch navy shell-guns lying on the beach, and one mounted on a carriage; they had all been spiked. There was no battery erected there, although we were informed that one would have been built but for our coming. There had been a camp at Portsmouth called Camp Washington, but a portion of the troops were sent to Fort Hatteras when it was attacked on August 28, and the remainder retired to the main-land.

Portsmouth, which formerly contained 450 inhabitants, was nearly deserted, but the people are expected to return; those remaining seem to be Union men, and expressed satisfaction at our coming. Lieutenant Eastman assured them that they would not be molested by the Government, and that they might return to their usual occupations.

There are no intrenchments nor guns at Ocracoke. The fishermen and pilots who fled after our attack have generally returned. I tried to destroy the guns by breaking the trunnions off with sledges, and by dropping solid shot upon them from an elevation, with little success. I then fired solid shot from a 64-pounder at them, and in this manner disabled them.

Lieutenant Eastman disabled the guns at Portsmouth by knocking off the cascables and leaving them in the salt water on the beach. After destroying the guns I collected all the lumber, barrels, and wheelbarrows, and placed them in and about the bomb proof, set fire to the pile, and entirely destroyed it. A light-ship, which had been used as a store-ship, and which was run upon the shore some distance from the fort, with the intention of subsequently towing off and arming, I also set fire to.

At half-past six o'clock this morning I started on our return; we met with no detention, and arrived safely with all hands at half-past eleven o'clock.

I am happy to report that the conduct of our men and the naval brigade was excellent. Lieutenant Eastman and Lieutenants Tillotson and Rowe, of the naval brigade, rendered me most efficient assistance.

I am, respectfully, your obedient servant,

JAMES G. MAXWELL, *Lieutenant, U. S. N.*

Commander S. C. ROWAN, United States Steamer Pawnee.

This secured the entire possession of the coast from Hatteras Inlet southward to Cape Lookout, and virtually to Cape Fear River; because the inlets between Cape Lookout and Cape Fear are small and shallow. Northward, the possession of Hatteras gave control of the coast to Hampton Roads.

Viewed simply as the bombardment and capture of two small forts, and the spiking or destroying the guns of another deserted one on the bare sands of that desolate coast, these things appeared very insignificant, and as such were ridiculed by some; but their real importance is seen when they are regarded as the first step, and that a necessary one, in the recovery of the coast and harbors of the South, when it is known that this was the first check put upon the illicit traffic by which the rebels were supplied; that it introduced our vessels into those important interior waters, which the forts at the inlet guarded, and prepared the way for the capture of the works on Roanoke Island, and the destruction of the rebel fleet and commerce. It is true that the blockade-runners sought other entrances; but, as channel after channel was closed, their chances of escape were diminished and the task of our blockading squadron, in watching the remainder, was easier. The subsequent operations upon Pamlico and Albemarle Sounds and their rivers, show how important a base these formed for the rebels, and how difficult it would have been to crush the rebellion had they remained in their possession. A garrison was left at Fort Hatteras, which found it both a dangerous and uncomfortable spot. In some of the severe storms they were driven from their quarters by the waves, subjecting them to annoying privations and dangerous exposure; while the rebels gathered about them, watching an opportunity to attack, and they succeeded in capturing a part of an Indiana regiment. To watch and repel such attacks was a part of the duty of the Navy.

One of these fights, in which the steamer *Monticello* was engaged, had some quite peculiar features. Colonel Hawkins, who was placed in command of Fort Hatteras after its capture—having heard that the rebels had occupied Roanoke Island, with the intention of fortifying it so as to protect both Albemarle Sound and an inlet near the island—thought it to be his duty to send a body of men to seize and fortify Chicamacomico, the extreme northern point of Hatteras Island, and about forty miles from the forts. Accordingly, the small steamers *Ceres* and *Pallas* were sent, with the Twentieth Indiana regiment, to take possession of the place. They started on the 29th of September, and reached the designated point the same day; but

the water was so shallow that even these light-draught boats were obliged to anchor three miles from shore, and from that point the troops were landed in small boats. They were, however, but partially equipped and very scantily provided with provisions, as these were to be forwarded the next day by the steamer *Fanny*, an army transport not connected with the Navy nor under its orders. The *Fanny* did not leave until the first of October. She reached her destination the same afternoon. Just as she arrived three rebel steamers made their appearance, but their true character was not known until they opened fire upon the *Fanny*. Had they been recognized when first seen all on board the tug might have escaped, for one barge had already been loaded with camp-equipage and some other articles, and this barge with ten persons had time to leave and get out of reach after the rebel gunboats came in sight; as it was, twenty-eight were captured with the *Fanny*. The rebels found the Union steamer quite a valuable prize. She had on board sixty barrels of flour, one thousand new overcoats, nine thousand pounds of beef, the goods of the sutler of the regiment, and two rifled cannon. The capture was not made without resistance. A gun-squad from Colonel Hawkins's regiment was on board, and they used a gun of the *Fanny* with such effect as to seriously injure two of the enemy's boats. But the *Fanny* was aground before the battle began, and besides she had to contend with twelve guns on the rebel boats. Her capture was seen to be inevitable and the men on board destroyed what they could, before she was surrendered.

So soon as the rebels learned the true condition of affairs, they conceived the bold design not only of capturing the six hundred men of the Indiana regiment, but of retaking the forts at Hatteras. The plan was to land a large body of men above the Union regiment and another below, between them and Hatteras, and thus render retreat impossible and their capture certain. Then, with a fleet of light steamers, they intended to pass rapidly down the sound and make a sudden attack upon the forts at the inlet. But for unforeseen events they might perhaps have succeeded. The rebel movement was attempted on the 4th of October. They had collected ten transports, six steamers, besides the steamer *Fanny*, one cotton-barge, and two flatboats;

carrying in all about three thousand men. This force the rebels divided, intending to land a part above and a part below the Indiana encampment. Colonel Brown, commanding the Union troops, divided his forces also, intending to fight the enemy at the two points indicated. At this juncture Colonel Brown received peremptory orders to retreat. Being at some distance from his camp, he had no time to return for supplies, and the regiment was compelled to begin a homeward march of some forty miles, destitute of nearly every thing which could sustain them on their journey.

The movement of the enemy's fleet revealed their intention, which was to land one body of their troops about eighteen miles below, and thus cut off the retreat; and it seemed to be reduced to a question of speed between steamers and men wading through the loose and scorching sand. The rebel flotilla, however, was delayed by some of the boats getting aground, and their troops were not landed until after dark; and Colonel Brown passing the point where the rebel fleet lay without being perceived, reached, after a day of intense suffering and fatigue, Hatteras light-house; where, early the next morning, they were reënforced by Colonel Hawkins's regiment sent up from the forts to relieve them. From them and the Susquehanna the half-famished six hundred obtained a supply of food and water.

Upon learning that the Indiana regiment had been reënforced, the rebels began a retreat up the island, which proved far more disastrous to them than that of the Union troops had been; for they were at once pursued not by marching troops but by a steamer, following them on the outside of the island. This steamer was the Monticello, commanded by Lieutenant D. L. Braine. As has been stated, the island is a narrow and almost bare sand-spit, not too wide to be swept by the shells of a light-draught steamer at nearly every point. A more perilous position could therefore scarcely be imagined for a body of troops than to be placed under the guns of such a steamer on this almost level sand-beach with no possibility of escape or shelter. Such was precisely the situation of the rebel regiments that had marched down toward Hatteras light-house, expecting to make an easy prey of the retreating Indianians.

The Monticello overtook them at Kinekeet Inlet, some fifteen miles above Hatteras light-house, and running in to within three-fourths of a mile of the beach, opened upon the shelterless mass with shells from her heavy guns. The precision of her fire was so great that the shells burst in the midst of them, causing both destruction and panic. Each shell, and they followed each other very rapidly, left great blanks in the masses where they fell, and in the utmost terror they scattered and ran. But they could not fly beyond the range of the Monticello's guns, for she easily kept them abreast of her, and fired into groups of them as rapidly as the excited and exulting gunners could load and point their pieces. Some of the rebels ran for shelter to a little grove of dwarfed trees, where the shells quickly followed making havoc among them again. As soon as possible the rebel flotilla drew inshore, but they could not get within range of the Monticello on the other side of the island, and, therefore, devoted themselves to the rescue of the regiments that were suffering so terribly from the Monticello's fire. The soldiers rushed into the water as the boats approached, and many were killed and wounded thus. Two heavily loaded barges were struck by shell and sunk or blown in pieces, thus adding terribly to the slaughter. It was one of the most horrible scenes of the war. For more than three hours the Monticello kept up this destructive fire until her ammunition was nearly expended; she having fired nearly two hundred shells, and night drawing on she hauled off leaving the rebels scattered for four miles along the beach, and the dead and wounded, and arms and accoutrements lying thick along a still more extended line. It was a one-sided fight, and one of the most deadly for the rebels in which they were engaged. The following is the official report of the commander of the Monticello, which will show that the preceding account is not too highly colored:

U. S. STEAMER MONTICELLO, OFF HATTERAS INLET, N. C., *October 5, 1861.*

SIR: I have the honor to inform you that, in obedience to your order of this morning, I stood through the inner channel of Hatteras Shoals at 12.30 P. M., and stood close along-shore to the northward, keeping a bright look-out from aloft. At 1.30 P. M. we discovered

several vessels over the woodland Kinekeet, and at the same time a regiment marching to the northward, carrying a rebel flag in their midst, with many stragglers in the rear; also two tugs inside flying the same flag. As they came out of the woods Kinekeet we ran close inshore and opened a deliberate fire upon them at the distance of three-quarters of a mile. At our first shell, which fell apparently in their midst, they rolled up their flag and scattered, moving rapidly up the beach to the northward. We followed upon them, firing rapidly from three guns, driving them up to a clump of woods, in which they took refuge, and abreast of which their steamers lay. We now shelled the woods and could see them embarking in small boats for their vessels, evidently in great confusion and suffering greatly from our fire.

Their steamers now opened upon us, firing, however, but three shots, which fell short. Two boats, filled with men, were struck by our shells and destroyed. Three more steamers came down the sound and took position opposite the woods we were shelling; also two sloops. We continued firing deliberately upon them from one and a half p. m. until three and a half p. m., when two men were discovered on the sea-beach making signals to us. Supposing them to be two of the Indiana regiment, we sent an armed boat and crew to bring them off, covering them at the same time with our fire. Upon the boat nearing the beach they took to the water, and one of them was successful in reaching the boat—Private W. O. Haver, company II, Twentieth regiment Indiana troops. The other man, Private Charles White, company II, Twentieth Indiana troops, was, unfortunately, drowned in the surf. Private Haver informs me that he was taken prisoner on the morning of the 4th; that he witnessed our fire, which was very destructive; he states that two of our shells fell into two sloops loaded with men, blowing the vessels to pieces and sinking them; also that several of the officers were killed; their horses were seen running about the track. He had just escaped from his captors after shooting the captain of one of the rebel companies. He states that the enemy were in the greatest confusion, rushing wildly into the water, striving to get off to their vessels. Private H. now directed me to the point where the rebels were congregated, waiting an opportunity to get off. I opened fire again with success, scattering them. We were now very close, in three fathoms water, and five-second shells told with effect. Six steamers were now off the point, one of which I recognized as the *Fanny*. At 5.25 p. m. we ceased firing, leaving the enemy scattered along the beach for upward of four miles.

I fired repeatedly at the enemy's steamers with our rifled cannon, a Parrott 30-pounder, and struck the *Fanny*, I think, once. I found the

range of this piece much short of what I had anticipated, many of the shot turning end over end, and not exceeding much the range of the smooth-bore 32-pounders. * * * *

I am, respectfully, your obedient servant,

D. L. BRAINE,

Lieutenant, commanding U. S. Steamship Monticello.

Captain J. L. LARDNER,

commanding U. S. Steamship Susquehanna,

off Cape Hatteras, N. C.

CHAPTER XXI.

THE MONITOR AND THE MERRIMACK.

As already stated, the Secretary of the Navy took the earliest opportunity of calling the attention of Congress to the construction of iron-clad vessels, having primary reference to their use in reducing the forts which the rebels had seized upon the Southern coast, but with the ultimate purpose of employing them in any service to which they might be adapted. In answer to this request, Congress authorized him to build one or more iron-clads, according to the recommendation of a board of naval officers to be appointed by him to examine and report in what manner an appropriation made should in their opinion be expended. That report is inserted in its proper place. It recommended the contracts which resulted in the construction of the Monitor, the New Ironsides, and the Galena. There was nothing peculiar or original in the plan of the last-named vessels. The one was intended to be an iron-clad corvette, and the other a mailed frigate, both essentially after the English and French pattern, and consequently the contractors ran no special risk. They were simply required to follow the specifications, and to construct a ship which would float the requisite weight of armor and of battery. The risk of their being shot-proof lay upon the Government itself. It was a very plain business, and the builders had for their guide the experience of England and France.

Here an important fact should be presented and considered by all who have been led to suppose that the Department devoted itself exclusively to the untried experiment of the Monitor plan, overlooking the experience of the world beside. So

far from this being true, the Secretary contracted almost at the same time for every principal form of iron-clad then known, in addition to the untried Monitor. The New Ironsides and the Galena represented the European broadside ship. The St. Louis, the first iron-clad which went into actual service in America, represented the class with roof-shaped or sloping armor sides, adopted afterward uniformly by the rebels, and the Monitor, an original creation; these present every form of mailed vessel which was brought into use at home or abroad during the period of the war.

The Secretary and his advisers, then, must receive credit, not only for taking measures at once to try all forms of iron-clads known, but for the boldness and courage to try a battery then unknown, and which has more than verified since the most sanguine expectations which its projectors and friends had formed.

For the encouragement of those who may hereafter be called upon to perform similar service, it is important that history should give due credit to the men who came forward cheerfully to the aid of the Government in the construction of the original Monitor. It has been said, and truly, that there was nothing unusual in the form of the contract into which they entered, nor in its forfeitures and guaranties, and that the Government retained in its hands merely the usual amount, and upon terms common to all its contracts. But these statements, though true, do not exhibit the real points of difference between undertaking to build a Monitor *at that time*, and an agreement to construct a common broadside iron-clad, or even one with sloping side-armor. It was not the technical form of the contract, but what the parties contracted to do, which shows the risk that patriotism was willing to take for the sake of the country. They contracted to furnish in a given time, and that a short time, a shot-proof battery such as had never before been known, original not only in general design, but in the arrangement of parts, with new methods of mounting guns—heavier guns than had before been used on shipboard—and they bound themselves to cause this novel vessel, with all her untried machinery, to work in all respects to the satisfaction of the Department, or forfeit the money advanced, and that twenty-five

per cent. of the whole amount they were to receive should remain unpaid until the Secretary should be satisfied with the performance of the vessel. As a necessary consequence of the contract, the vessel was not accepted by the Government until after the fight at Hampton Roads. This fact has been frequently urged as if it were good ground for an accusation against the Department for illiberal dealing with the contractors. Had the Secretary taken the responsibility of this untried experiment, beyond the proper encouragement which he gave for the construction of the battery, he would have exceeded in the judgment of most the bounds of prudence, but this throws into stronger relief the bold patriotic enterprise of the men who were willing to stake capital and reputation upon an untried experiment. The Secretary took upon himself the share of the burden which belonged to him, and the inventor and contractors cheerfully accepted the rest; and thus it came to pass that, with no fault on the part of the Government, the naval battle, upon which more depended than upon any single combat of modern times, was fought by a ship not yet accepted by the Navy Department, and the acceptance or rejection of which depended upon the issue of the battle, for there had been no opportunity for a trial-trip.

While the Secretary of the Navy was urging forward the construction of the first iron-clads, it was known that the rebel government was making great exertions in the same direction. Iron-clad vessels were under way at New Orleans, Charleston, and at some other points, while at Norfolk the Merrimack was very near completion in the winter of 1861-'62.

The formidable character of this mailed frigate constrained the Government to make every effort to complete the Monitor in season to meet her whenever she should come out; and it is stated that information obtained by a rebel spy of the state of forwardness in which the Monitor was, induced the rebels to put a double force upon their frigate, so that she might be able to attack our fleet in Hampton Roads before the Monitor's arrival, and, if possible, also to make a raid upon Washington or the Northern cities. This extra labor, it is said, gained the one day in which the Merrimack destroyed the Cumberland and Congress. At the beginning of the rebellion it seemed impos-

sible to withhold from the rebels any thing that they desired to know, while it was by no means easy at all times for the Government to penetrate their plans.

The Monitor, commanded by Lieutenant John L. Worden, reached the scene of late disaster to our cause, and of her coming triumph, on the 8th of March, at 9 o'clock p. m., and Lieutenant Worden reported for orders to Captain Marston, the commander of the Roanoke. The Minnesota, one of our noblest frigates, the Roanoke of the same class, but partially disabled, the frigate Congress, and the sloop Cumberland, had been stationed at the mouth of the James River to watch for, to engage, and, if possible, destroy, capture, or stop the expected rebel iron-clad frigate then ready for sea at Norfolk. These vessels carried very heavy batteries, and it was hoped that they would be able to cope with the Merrimack. How vain such an expectation was, her first day's operations fully and sadly demonstrated. It is probably no exaggeration to say that she would have destroyed easily, and without any material damage to herself, every wooden ship then in our Navy, had they been within her reach, and with none but themselves to oppose her. The heaviest shot from the guns of our first-rate frigates produced no serious impression upon her, and the futility of running an iron-clad with wooden vessels was afterward shown at Mobile.

The 8th of March, 1862, was probably the darkest day of the war for the cause of the Union. The new and really splendid Army of the Potomac had done nothing whatever to wipe away the disgrace and disaster of Bull Run. The country had sent forward its young men in almost uncounted thousands, it almost idolized its new commander-in-chief, it placed all its hopes for the future upon it, and the Government expressed a purpose to spare nothing which could contribute to its comfort, its safety, and its success. An impatience for immediate operations soon manifested itself, and clamors were loud for the Potomac army to move against the enemy. At length Mr. Lincoln's patience was exhausted, and a positive order was issued for a general movement of all the forces of the Government on or before a certain day named, in February, and the nature of the movement was prescribed for the Army of the

Potomac. McClellan strenuously opposed the plan of the Government, and urged one of his own; and the President yielded to a council of generals, against his own judgment, when it was found that the rebels, by a movement of their own, had rendered his contemplated scheme impracticable, and, as a consequence, a movement by the peninsula was determined upon early in March, with Fortress Monroe as the base of operations.

But the success of the new movement depended upon the question whether our Navy could command Hampton Roads, and the Potomac, Rappahannock, York, and James Rivers; for if this could not be done, then clearly an advance upon Richmond by way of Fortress Monroe was entirely out of the question. Even had it been possible to land the army on the peninsula, it would have been impossible to supply them without the entire control of the adjacent waters; and in case of the necessity of a retreat, such as actually occurred, if the rebels had held those rivers, the Union army would have been annihilated. The Government knew well the formidable character of the armed frigate which was nearly ready for sea at Norfolk, and it had nothing wherewith to meet her except the untried nondescript of Ericsson, and even that was not quite ready for use. When the sun went down on the 8th of March, it appeared to those who were acquainted with the appalling facts that the cause of the Union was well-nigh, if not utterly, lost. No victory with such decided results for the present, or with such bright hopes for the future, was gained by the rebels either before or after. That night was one of exultation among the conspirators wherever the telegraph could convey the news. The easy and entire destruction of the Union Navy, the defeat of the projected movement on Richmond, or the capture of the army if it should move, the capture of Washington, the laying of the Northern cities under contribution, the raising of the blockade, recognition in Europe, in short, the complete triumph of the rebel cause, seemed the natural consequence of that day's work and triumph. The rebels knew of nothing between them and entire success, and our own Government had no means of arresting this impending ruin, except an experimental and most diminutive war-ship, in which experienced naval officers and

scientific naval constructors had little or no confidence, and even that had not reached the scene of action.

The attention of the public has been drawn so exclusively to one feature of this battle at Hampton Roads, the fight between the iron-clads, that the havoc which the Merrimack made with what was really a very formidable wooden squadron, has not been duly considered; and the real importance of the conflict will not appear, until some facts which have been partially lost sight of are set in their proper light. On the morning of the 8th of March the following naval force was stationed at or near Fortress Monroe and Newport News:

The Minnesota, 50 guns; the Roanoke, 50 guns; the Congress, 50 guns; the St. Lawrence sailing frigate, 12 guns; the Cumberland sloop, 24 guns.

These vessels were armed mainly with 8-inch and 9-inch guns, while some had, in addition to the broadside battery, a 10-inch pivot-gun. Outside of the American Navy there could not have been found five ships of similar rate whose batteries would compare with theirs. In the early part of that disastrous day the Congress and Cumberland were anchored off Newport News, the Minnesota and the Roanoke were some six or eight miles distant, near Fortress Monroe, while the St. Lawrence was also near.

At 9 A. M. two steamers were discovered from the Cumberland at anchor in the James River, about twelve miles distant. As was afterward shown, they were intended to join those which were expected to come out that morning from Norfolk. Ere long, lines of black smoke, lying along the horizon over Elizabeth River, indicated the approach of steamers from that direction. At 12 M. three steamers were visible from the Cumberland. They were standing down the Elizabeth River and toward Sewall's Point. At 12.45 these steamers rounded Sewall's Point, so as to be visible from the decks of the Minnesota, when it was at once seen that one was the expected Merrimack, and that the other two were gunboats.

Preparations were instantly made on all sides to receive this formidable attack. The Minnesota slipped her cable and got under way, and the Roanoke, whose machinery was disabled, was taken in tow by two steam-tugs, and proceeded as

rapidly as possible toward Newport News, where the Cumberland and Congress were, the vessels at which the rebel steamers were aiming. A tug was also dispatched to bring up as speedily as possible the frigate St. Lawrence. The channel between Fortress Monroe and Newport News runs within cannon-shot of Sewall's Point, and on that the rebels had established a battery of rifled cannon. This battery the Minnesota, the Roanoke, and the St. Lawrence, towed by tugs, had to pass in going to Newport News, and they suffered somewhat from its fire, as will hereafter appear. In order to present more clearly the events of this unequal battle, a brief description will be attempted of the scene on board each separate ship, although no narrative can convey any adequate idea of the terrible reality. The following facts are gathered in regard to the Cumberland: she was a sloop, carrying twenty-four heavy guns, and was nearly the size of the frigate Constitution, of some 1,700 tons burden. As soon as the Merrimack, with her two consorts, was discovered coming from Norfolk, at 12 M., the crew were summoned to quarters, the ship was cleared for action, and the guns on the main-deck were double breeched. All the stern and sad preparations for battle were duly made—the guns all shotted, the men in position, the magazines opened; shot, shell, cartridges, all in place; the powder-boys at their stations; swords, pistols, boarding-pikes in the racks; the surgeons' tables gleaming with the instruments which made brave men shudder with the thought of what a few moments would bring.

Three hundred and seventy-six men on the Cumberland, and four hundred and thirty-four on the Congress, stood there, one-third of them, as the event showed, within a step of eternity. Never were brave men called upon to make a more hopeless battle. It was martyrdom in the cause of country—the sad privilege of dying for their flag. For a few moments, it is true, this was not apparent. Yet there was a solemnity over all the ships' companies that no ordinary circumstances could inspire, for they knew not what they were to meet. They could not measure in any manner the power of their enemy, nor what engines of death he was about to wield. They knew they had to face a terrible foe—more fearful, because they knew not with what weapons he would attack, nor what were his means of de-

fence. At a little past 2 p. m. the huge mailed frigate had approached the Congress within grape-shot distance; and then, every man in his place, the guns trained to the proper elevation, the lanyards in the gunner's hand, scarcely a sound was heard throughout the devoted ship while they awaited the attack of their dreaded foe. A puff of smoke from one of her bow-guns, and every breath stopped an instant till a storm of grape swept over the deck and rattled on her sides. A long breath of relief that it was no worse. Keeping on her course, she was passing the Congress at less than one-fourth of a mile distant, heading for the Cumberland. At that distance the Congress delivered her broadside. Her heaviest shot glanced harmless from the side of the mailed monster, and all felt that the battle was already decided, and that nothing remained but to surrender or be destroyed with their ship. The return fire of the Merrimack only confirmed their worst fears. Her shells came crashing through the sides of their ship, spreading death and ruin on every side. They knew that success was hopeless, escape impossible, and resistance vain. Yet an American fifty-gun ship could not be surrendered thus, and so the strong-hearted martyrs stood by their flag and to their guns. But it was not the intention of the rebel commander to finish his work then. Passing the Congress at the distance of about three hundred yards, he ran direct for the Cumberland. She, like her consort a sailing ship, lay perfectly helpless so far as motion was concerned, and all awaited with silent dread the approach of the rebel frigate, double her own size. With a desperate hope that she might not prove invulnerable, they opened upon her when at short range with their heaviest guns. Breathlessly officers and men watched the effect of their shot, and, as they glanced away from her sloping sides, or fell smitten back into the water, they turned on each other looks of mingled wonder and hopelessness.

Still no one thought of surrender to that rebel flag. The fire of the Cumberland was received silently by the Merrimack as if with contempt, and she came straight on, and in a moment more her iron prow smashed through the sides of the Cumberland as easily it seemed, as an egg-shell could be crushed in the hand, and at the same time a shell from every gun which could

bear crashed through her timbers and exploded upon her decks, piling splinters, gun-carriages, guns, and men in one confused wreck. The slaughter was sickening. As if satisfied that her work was done, the Merrimack hauled off and steered for the Congress. The scene on the Cumberland was an awful one. The dead and wounded strewn her decks and crowded the cockpit; while the roar of the water, as it rushed through her shattered side, and the rapid settling of the ship, told that she would float but a few minutes longer. But the guns were loaded once more, and when the water had already reached the gun-deck, the guns just above the water, the brave remainder of the crew fired a last broadside, and as the ship settled to the water's edge leaped into the waves. She heeled heavily to port and went down, and when she touched bottom her flag was still flying above the water, but it was over the grave of more than one hundred men. There was time for the wounded in the cockpit who were able to walk to go on deck; but the berth-deck and sick-bay were full of poor fellows so mangled by shells and splinters that they could not be moved, and they went down with the ship.

So soon as the fate of the Cumberland was seen from the Congress, the jib and topsails were set, and with the aid of a tug the frigate was run ashore under a heavy fire from the smaller steamers which were enabled to fire with great precision at so large and stationary a mark. Their guns were rifles, and, as nearly every shell reached its object, the vessel was rapidly cut up, and the men were swept away from their guns with a fearful slaughter. The Merrimack then took a position astern, about one hundred and fifty yards, and raked the helpless frigate fore and aft with shells which crushed through her sides and exploded on her decks, setting her on fire in several places.

The two steamers from the James now joined in the fight, and soon the Congress had not a single broadside gun which could be used, and in a few minutes more one of her stern-guns was dismounted, and the muzzle of the other was knocked off. The ship was now perfectly defenceless, her commander was killed, and, as all further resistance was impossible, the flag of the frigate was struck—not disgraced, but borne down by an

overwhelming superiority of force. A tug from the enemy came alongside, and the commander ordered the crew out of the Congress as he intended to burn the ship. This tug was driven off by the artillery and musketry of the troops on shore, when the Merrimack again opened fire, and threw several shells into the burning frigate, though a white flag was flying at the peak. The ship had been set on fire in several places by hot shot from the Merrimack, and as no hopes were entertained of saving her, and as their enemy had hauled off to engage the Minnesota, the boats were manned, and the wounded and crew were removed. The fire soon after reached the magazine, and the fragments of the mangled and bloody ship were scattered over the waves. Thus, in a little more than two hours, the rebel iron-clad had destroyed a heavy frigate and a large sloop, mounting together seventy-four guns, and had slaughtered in battle and drowned two hundred and fifty of their crews, a destruction scarcely matched elsewhere in naval war, and settling forever the question whether wooden vessels could contend successfully with an armored ship.

But the work of this new terror of the sea was not yet finished. Leaving the sunken sloop with the remnant of her crew struggling in the water, and the burning frigate and her men to their fate, the Merrimack headed once more for the Minnesota, accompanied by the Jamestown and Patrick Henry. The Minnesota was at this time hard aground, and incapable of changing her position to meet or avoid an attack. Fortunately, the shallow water prevented the iron-clad from approaching the Minnesota nearer than a mile, and this alone prevented her instant destruction. She did not fire with accuracy, and only a single shot from her battery at that time struck the Minnesota, and that passed through her bow. Much greater damage, however, was done by the small rebel steamers which were armed with rifled guns. As the frigate was aground, they could choose both position and distance. Their fire for a time was very destructive; but the one heavy gun which the Minnesota could bring to bear finally drove them off. The 10-inch pivot-gun of the frigate was used against the Merrimack, but officers and men were not merely mortified to see the shot fall harmlessly from her sides, but they were convinced that their own noble

ship was as helpless before such an enemy as the Cumberland and Congress had been. It was evident that the moment the Merrimack could reach them their frigate would be destroyed. After a three hours' trial, the Minnesota keeping the small steamers at a distance with her one large gun, and the Merrimack vainly endeavoring to reach her, the rebel steamers hauled off at 7 p. m., and all three steamed toward Norfolk.

Thus was closed up an era of naval war—an era which had been made memorable by the great sea-fights of more than a hundred years, and in which the great navies of modern Europe had been created. In a single day the foundations of the great maritime powers had been shaken, the nations stood in new relations to each other, and wooden navies, except for certain specific purposes, were to pass away among the rubbish of the past as the bow and the catapult and the mailed warrior vanished at the introduction of fire-arms. It was the beginning of a revolution in war whose ultimate results cannot even now be calculated.

In the opinion of the rebel chiefs, nothing lay between them that night and the ruin of the Republic and the establishment of a slave empire that would control the continent. So far as human wisdom could see, there was even in the view of the most sanguine friends of the Union nothing to prevent the triumph of treason but an untried experiment, whose issue none could tell. There was, however, one other obstacle to their success not then duly considered, and that was, the decision of God. God was against the rebels, and He had decided that slavery and the rebellion should go down together. He had provided an instrument for their ruin at which, could the flushed and confident traitors have seen it that night, they would only have laughed. They little thought that, in two hours from the time when they left Hampton Roads so exultingly, an avenger would be there that would spoil the spoiler, and bring all their expectations to nothing.

At 9 p. m. the now famous little Monitor arrived from New York, and about 2 o'clock the next morning anchored alongside the Minnesota. It certainly was a great relief to the officers and crew of the frigate to know that an iron-clad of any kind was ready to help; but after having seen how formidable the

rebel frigate was, invulnerable herself; but armed with a power of destruction really terrific, they could not have been very confident of their safety.

The Sabbath morning came clear and bright, and all on land and water was so calm and peaceful that it seemed like a preparation for the funeral of the two hundred and fifty brave men who had just given up their lives in a vain defence of their flag, and in a contest perfectly hopeless from the beginning. The flag of the Cumberland was waving yet just above the water, sadly marking the spot where the shattered wreck and the dead were lying, and here and there the sea-birds were hovering over a floating corpse, or where some one had drifted to the beach. The remainder of the crews of the lost ships were gathered in sad groups at Newport News. The straightened, motionless forms among the wounded showed that some of the wounded had died during the night, and the men of the Cumberland missed the attention and consolations of their chaplain, for he had gone down with the ship. All was gloom on the ships and on shore. Sorrow for the past and dread of the future had laid a cloud on every brow and a weight on every heart. The Minnesota, badly cut up already, was still hard aground, immovable; the Roanoke was unmanageable from the breaking of her machinery; and the St. Lawrence was a sailing vessel: and it was evident that nothing but the Monitor lay between them all and destruction, and certainly the queer-looking, diminutive thing appeared to be a most ineffectual shield. The old sailors looked at her with curiosity, but they shook their heads. It was evident that they considered the case a hopeless one. The Merrimack was not tardy in beginning her morning work. At 6 A. M. she again appeared coming down from Craney Island. The drums beat to quarters, on board the Minnesota, breaking the morning stillness with less of hope than that call ever occasioned before on the deck of an American ship. It sounded in all ears more like a funeral knell than a summons to triumphant battle. Contrary to expectation, the rebel iron-clad passed the frigate and the Monitor, and headed for Fortress Monroe, keeping out of range. The retreat was beat on board the Minnesota for the purpose of giving the crew their breakfast, that they might be better prepared for the

battle. After steaming down near the Rip Raps, the Merrimack turned into the channel by which the Minnesota had come up, and was once more rapidly approaching. Again the frigate's crew were hurried to their quarters. When within the distance of a mile the Minnesota opened upon her with her stern-guns, and at the same time signalled the Monitor to attack her. The confidence which Lieutenant Worden felt in the Ericsson battery was then immediately shown. He placed the Monitor exactly between the Minnesota and her enemy, covering her so far as such a diminutive craft could do, and steered directly for the rebel frigate.

The Merrimack slowed her engines, and paused as if to survey her nondescript adversary, and ascertain if possible its character. She was evidently startled by the audacity as well as the strange appearance of this new Yankee creation. There was no means of measuring its power, or of knowing what weapons of destruction it carried. Evidently, however, those on board of it had something at their disposal in which they trusted, for it came right on as if there was no thought of danger. Some uneasy glances were exchanged among the older officers, but with most on board the iron-clad, the insignificant-looking thing was a subject of merriment. Something, however, must be speedily done, for it was seen that in a very few minutes it would be directly alongside their frigate.

The Merrimack trained her forward guns upon what seemed more like a large buoy floating toward her than a man-of-war, but her gunners had not now a frigate's broadside to aim at. Almost nothing rose above the water but the turret, presenting to her fire a cross-section of not more than twenty feet by nine feet, and from that a ball was certain to glance unless striking exactly in the centre. It was not surprising that she missed the mark, and the Monitor still went on untouched. Her answering gun was an admonition indeed. The solid 11-inch shot smote the huge frigate with a blow that made her shudder through every timber. Startled and maddened, the rebels delivered a full broadside. Most of the shot went over the submerged little battery, but some struck the turret and fell back or glanced off as harmlessly as, says an eye-witness, "pebbles thrown from the hand of a child." It was now the turn of the

rebels to be astonished. In vexation of spirit at the unexpected rebuff, they fired still more rapidly broadside after broadside, pausing till the smoke cleared off to see whether their little enemy had not gone to the bottom; but ever finding her still afloat, unharmed and active as ever, bending and starting with her immense shot the frigate's armor, and shaking her huge frame in a manner that they knew must in due time be fatal to their ship. The excitement was scarcely less on board of our own ships and on the shore. The combat seemed so unequal when the great frigate was compared with her little adversary, and the Merrimack had shown the day before such power both of resistance and attack, that every movement was watched with breathless interest, for they knew if the Monitor was destroyed or beaten all was lost. No wonder that the captain of the Minnesota wrote in his official report that he was astonished to see Lieutenant Worden lay the Monitor right alongside the Merrimack. It seemed not boldness, but recklessness. It appeared impossible that she should not be destroyed at a blow, scattered into fragments by a broadside, or run down and sunk by the rebel ram.

Among the deeply interested spectators of the fight were Captain Fox, the Assistant Secretary of the Navy, and Lieutenant Henry A. Wise, afterward Chief of the Ordnance Bureau. They had gone down from Washington in a tug with ammunition for the Monitor, and they went out to view the result of the experiment on which the war at that moment hinged, and in which the reputation of the Department was so deeply involved. When they landed, after the fight, the attention of Captain Fox was drawn, providentially the Christian thinks, to the 15-inch gun lying there, which circumstance led to discussion and finally to the adoption of that formidable weapon in the armament of the Monitors.

After some time spent in close-range fighting, the Merrimack firing broadsides with great rapidity, and the Monitor remaining still uninjured, both vessels began to manœuvre to obtain if possible some advantage. Like two trained pugilists, they watched each other's motions, prepared alike to strike or ward off a blow. Now the Monitor was seen to dash straight at the frigate as if to send a shot through a port, since she could not penetrate her ar-

mor; and then shooting past, would aim a blow at her stern, and then the two would close broadside to broadside as if in a death-wrestle. All effort on both sides seemed in vain. The little battery was not harmed; and, though the armor of the Merrimack appeared bent and loosened, her fighting power appeared to be undiminished. Finding that she could make no impression, she suddenly turned and headed for the Minnesota, hoping to crush her before the Monitor could interfere. In the morning, when she passed up, she had struck the frigate with a heavy shot just above the water-line; and she had good reason to believe that, if she could first give her a broadside of shells, and then strike her with her beak, she would be destroyed. As she came within point-blank range, the Minnesota gave her a full broadside, including the 10-inch pivot-gun—a broadside, says Captain Van Brunt, “which would have blown out of the water any timber-built ship in the world.” But it produced no effect upon the Merrimack. She returned the fire with her rifled bow-gun, with a shell that spread havoc through the ship, tearing four rooms into one, and exploding two charges of powder that set the ship on fire. Her second shell blew up the tug-boat Dragon, lying alongside, causing for a few minutes consternation aboard the frigate.

In the mean time the Monitor had not been idle; and by the time the rebel frigate had fired her third shell, the little craft was down upon her, and threw herself between the two, compelling the Merrimack to change her position. The Minnesota had concentrated a fire upon her from the gun-deck, the spar-deck, and forecastle pivot-guns, but the shot all glanced off harmlessly from her sloping sides. After the Monitor came between, the Merrimack, in changing her position, grounded. While in this position, the Minnesota again attacked her with every gun she could bring to bear, but with no more effect than before.

When the Merrimack again floated clear, she steamed down the bay pursued by the Monitor, the iron stripling chasing the iron giant. It seemed as if the officers of the rebel craft felt that this was beyond endurance, for the Merrimack suddenly turned and ran full speed into the Monitor, as if determined to crush her or force her under. She struck a glancing blow, and the little battery glided out from beneath her, and then fired

while the vessels were almost in contact. The shot seemed to crush in her armor, but exactly the extent of damage done was never known. At this short range the frigate once more concentrated her fire upon the Monitor's turret with a fury that indicated a last, desperate effort. But it was all in vain. Determined not to be defeated, the rebels started once more for the Minnesota, the Monitor having hauled off a little, as was supposed, to cool her guns. The situation of the noble frigate was for a few moments more perilous than ever. She was immovably aground, and the Merrimack and her two consorts could choose both distance and position; officers and crew were worn out with fatigue, but still these noble men determined that they would never give up their ship, terribly crippled though she was, and nearly out of ammunition, and every preparation was made to destroy her if the last extremity should come. Suddenly, however, the rebel ships all changed their course once more, and headed for Norfolk, the Merrimack appearing to be in some manner disabled or severely injured. The rebels have since declared that, in attempting to sink the Monitor, her iron prow was broken, and she sprung a leak, so as to compel her to put back into Norfolk. As she never ventured out again, except to be blown up, the more rational conclusion is that her armor and frame were so much shaken by the heavy shot delivered, many of them at a distance of only a few yards, that she was deemed not seaworthy, and was consequently destroyed.

Had the rebel authorities believed her capable of meeting the Monitor again, she certainly would not have been destroyed. The last shell fired by the rebel frigate exploded exactly opposite the eyehole in the pilot-house, where Lieutenant Worden was at the moment looking out. His eyes were severely injured, his face filled with powder, and there was also a slight concussion of the brain. The moment this brave officer recovered his consciousness, his first question was, "Have we saved the Minnesota?" When told she was safe, he answered, "I am satisfied." He was taken at once to Washington, and an incident connected with him there, illustrates the character of Abraham Lincoln. A cabinet meeting was being held, when it was told the President that the wounded commander of the

Monitor was in the city. He instantly rose, took his hat, saying: "Excuse me, gentlemen, I must see this *fellow*;" went immediately to his room. Worden was on the sofa, his eyes bandaged, his face swollen and bloody. The President was announced, and he took his hand in silence. "Mr. President," said the wounded officer, "you do me great honor by this visit." "Sir," replied Mr. Lincoln, while the tears ran down his cheeks, "I am the one who is honored in this interview."

Thus ended what was, at the time it was fought, undoubtedly the most remarkable naval action of modern times, perhaps of any time, if regarded in connection with all its important consequences. Considered as a battle between an iron-clad and wooden vessels the result was, one frigate and one sloop-of-war and one steam-tug destroyed; two hundred and fifty men slaughtered in the fight or drowned; another of our finest frigates nearly dismantled, with not one-fourth of her battery in a condition to be used when she reached Fortress Monroe; another frigate still, injured, and the iron-clad apparently unharmed.

As between wooden ships contending with a broadside iron-clad frigate, and a Monitor fighting the same frigate for nearly twice the time, the account stood thus: the killed, wounded, and destruction of ships as just stated; while the iron-clad frigate was completely victorious, and herself uninjured, when fighting the wooden vessels. But in her four hours' fight with the same iron-clad, not a man was killed on board the Monitor, she herself was unharmed, and the broadside iron-clad was defeated, driven off, and so far injured, that soon after the rebels destroyed her. It would be impossible probably to set the advantages of the Monitor battery in a clearer light than this by any other experiment, and yet the public was slow to perceive all the inevitable results which that experiment involved, especially as the Monitors which were tried at Charleston did not perform *impossible* things, and only endured with trifling injury a fire which would have sunk any other vessels in America or Europe.

It was generally conceded that the great wooden navies of the world were useless in contending with iron-clads. It was evident that such a frigate as the Merrimack could easily destroy a whole squadron of wooden first-rates should they dare

to meet her, and that no fleet of such, however powerful, could blockade a port, or occupy a harbor, against one such mail-clad frigate. This of itself was an amazing revolution in naval war, and in the relative power of nations. The supremacy of the great naval powers was stricken down, for a small nation that could obtain one first-class iron-clad could protect itself against the wooden navies of the most powerful. But there was another fact whose significance at first was not so clearly seen. A broadside iron-clad frigate which, to say the least, was as formidable as any other broadside vessel then afloat, was beaten and seriously injured in a battle with a Monitor of scarcely one-fourth her size and mounting only two guns. The country was somewhat slow in drawing the proper inference from this. Nor could it well be otherwise. Few understood the essential and distinctive principles of the invention of Ericsson. Some leading men in Congress unfortunately felt called upon to make an attack upon the Navy Department, and selected the Monitors, as, in their opinion, the most vulnerable point. Some leading papers united with them in the assault, and the public mind was for a time confused and misled. The truth was, as events have subsequently shown, that the fight at Hampton Roads decided the case as completely against broadside iron-clads, as it did against wooden ships. Not only the wooden navies of Europe, but also their iron-clads, such as they were then, were virtually set aside as things of the past. Before our war was over, it would have been as useless to have sent the finest broadside armored vessel of Europe to attack our best Monitors as to have ordered a wooden vessel on the same errand. One would have been destroyed as quickly as the other.

When the *Monadnock* made the voyage to San Francisco in safety, and almost at the same time the *Miantonomoh* reached a European harbor, having met no difficulty in crossing the Atlantic; when it was seen that there is scarcely a limit to the size of the gun which a Monitor ship can carry; that those already built could mount and work 20-inch cannon, while even 15-inch guns could not be carried by any broadside ship then known, it was then perceived that what was really settled at Hampton Roads was this: that the navies of the world, both wooden and iron-clad, must be laid aside, and the nations must

begin anew. The time has already gone by when Europe will expend millions in constructing such iron-clads as she has built already. Home questions of the greatest importance were also decided there. It was settled that the rebels could not create a navy which we could not destroy. They had formed all their plans upon the idea of the broadside vessel with sloping armored sides, and even had they desired, they could not change them in season to meet the fleet of Monitors which were ready so soon. But they had confidence in their method of construction, and made no account of the fact that the Monitor ship could carry safely a much heavier gun than those used against the Merrimack. Owing to this mistake, when the Atlanta was ready they did not hesitate to send her against two Monitors, when her case was settled by the first 15-inch shot which struck her. The fate of the whole rebel navy was sealed at Hampton Roads. The fight with the Merrimack rendered it possible to undertake the expedition to Richmond by the peninsula; and when McClellan's army was once near Richmond, its destruction would have been certain if the rebels could have commanded James River and the adjacent waters; and although the Merrimack continued at Norfolk until near the middle of May, and though the rebels well knew the vital importance of holding James River, they did not venture to encounter the Monitor again.

There were many critical points in the progress of the war which seemed so clearly marked by the special interposition of God as to impress the popular mind, and one of the important results of the rebellion was to strengthen the belief that God, as King of nations, watches over and directs their affairs, and controls even the issue of battle. The Christian cannot but believe that the eye of God followed the little Monitor during the perilous passage from New York; that He preserved her for the purpose He had in view; and we can see now that, if the Merrimack had not been permitted to destroy the Congress and Cumberland, one important part of the problem would have remained unsettled, and the battle of the iron-clads only would have produced far less impression both at home and abroad. It was that which was needed to produce the effect. That startled Europe, and settled the question of intervention.

CHAPTER XXII.

CAPTURE OF ROANOKE ISLAND—OPERATIONS IN PAMLICO AND ALBEMARLE SOUNDS.

ALTHOUGH the capture of the forts at Hatteras Inlet in August, 1861, had secured the principal entrance to the sounds of North Carolina, the rebels had still the means of annoying our coastwise commerce by sending out through the lesser inlets, small craft, armed often with only a single gun, by which they seized some vessels that were passing near the shore. They had quite a fleet of light-draught steamers, many of which were swift, and armed with rifled guns, with which they not only commanded the sounds, but were also ready for any little piratical expedition that promised either plunder or damage to the Union cause.

Besides, these interior waters offered at several points facilities for constructing vessels for the rebel navy, and it was known that some formidable iron-clads were under way. It became, therefore, important for the Government, not only to clear these sounds and their tributary waters of enemies, but to hold possession of them by a suitable force of our own. Early in January a joint expedition of the Army and Navy was fitted out for operation against the rebel works and steamers in these inner waters of North Carolina. About seventeen thousand troops were placed under the command of Brigadier-General A. E. Burnside, while the naval force was under the direction of Flag-Officer L. M. Goldsborough. * The following table shows the character of the naval squadron that was prepared for this service. They were all vessels of light draught, because there is not, under the most favorable circumstances, more than

seven and a half feet of water in the channel-way of the bulk-head, and this passage is also narrow and tortuous. In order, however, that these small vessels might successfully contend with the forts and rebel gunboats, they were armed with guns of heavy calibre:

Names of Vessels.	Names of Commanders.	Armament.
Stars and Stripes	Lieut. Com'g Reed Werden.	4 8-in. of 55 cwt.; 1 20-pdr. Parrott.
Louisiana	Lieut. Com'g Murray	1 8-in. of 63 cwt.; 1 32-pdr. of 57 cwt.; 2 32-pdrs. of 33 cwt.; 1 12-pdr. rifled Dahlgren.
Hetzel	Lieut. Com'g Davenport....	1 9-in. of — cwt.; 1 80-pdr. rifled.
Underwriter....	Lieut. Com'g Jeffers	1 8-in. of 63 cwt.; 1 80-pdr. rifled; 1 12-pdr. rifled; 1 12-pdr. smooth bore.
Delaware	Lieut. Com'g Quackenbush.	1 9-in. of — cwt.; 1 32-pdr. of 57 cwt.; 1 12-pdr. rifled.
Valley City	Lieut. Com'g Chaplin	4 32-pdrs. of 42 cwt.; 1 12-pdr. rifled.
Southfield	A. V. Lt. Com'g Behm	3 9-in. of — cwt.; 1 100-pdr. rifled.
Hunchback	A. V. Lt. Com'g Colhoun ..	do. do.
Morse	Act'g Master Hayes	2 9-in. of — cwt.
Whitehead	Act'g Master French	1 9-in. of — cwt.
Seymour	Act'g Master Wells	1 30-pdr. rifled; 1 12-pdr. rifled.
Shawsheen	Act'g Master Woodward....	2 20-pdrs. rifled.
Lockwood	Act'g Master Graves	1 80-pdr. rifled; 1 12-pdr. rifled; 1 12-pdr. smooth bore.
Ceres	Act'g Master McDiarmid ...	1 30-pdr. rifled; 1 32-pdr. of 33 cwt.
Putnam	Act'g Master Hotchkiss....	1 20-pdr. rifled.
Brincker	Act'g Master Giddings....	1 30-pdr. rifled.
Granite.....	Act'g Master's Mate Boomer	1 32-pdr. of 57 cwt.

These armaments, as is seen, are very heavy for vessels drawing only eight feet of water, several of them carrying 9-inch guns, larger than the 68-pounder, which, at the beginning of our war, was the heaviest broadside gun in the English Navy. Some of these light steamers carried a 100-pounder rifle, and several had 80-pounder rifles on board. This armament for such small craft marked one of the many changes which were so rapidly made in naval war. If only the size and tonnage of the vessels of this squadron were stated, no indication would be given of its actual force. Few would be led even to suspect that it could make a successful attack upon a heavily-armed fort.

In addition to the armed vessels belonging to the Navy, and the coal schooners, a large number of army transports belonged to the expedition; and the whole number of the various kinds of craft finally assembled at Hatteras Inlet, was stated in the

accounts of the day at one hundred and twenty. This heterogeneous squadron of Navy steamers, tugs, sailing vessels, and steam transports, was sent on a winter voyage to one of the stormiest and most dangerous points upon our coast. It reached Hatteras Inlet at the commencement of a furious northeaster, during which great damage was done, and the whole squadron was in imminent peril. Outside of the bar there was no safe anchorage in such a gale, and an attempt to enter the narrow, shallow, crooked channel of the inlet would only have invited destruction.

Some of the disasters, occasioned by the several storms which the expedition encountered, are worthy of record, as showing the perilous nature of the service. One of the craft which, in derision, were named "floating batteries"—large barges or canal boats, loaded with hay, oats, and other stores—pitched and sheered so much in the heavy sea that she could not be towed, and it was found necessary to rescue her crew before she should go down. The boat which took these off was swamped under the guards of the steamer, and all on board were pitched into the sea, and with the greatest difficulty were saved. The tow-line was then cut, and the Grapeshot left to her fate. She went ashore some fourteen miles above Hatteras, and her cargo of hay and oats served to keep alive some horses which got ashore there from the wreck of the Pocahontas.

For some reason the War Department was not always as fortunate in procuring vessels as the Navy Department. It was sometimes impossible to obtain ships or steamers suited to the service required, and too many were quite willing to deceive the Government and to take advantage of its necessities. The embarrassments and losses of the Government were very annoying and expensive in this expedition; men who had vessels for rent or sale, in too many instances, seeming to care nothing for the exposure of lives and property which must necessarily occur on board their unseaworthy boats.

The old steamer Pocahontas, which was chartered as a horse-transport, was an illustration of some of these remarks. She had on board one hundred and thirteen valuable horses. During the gale her boilers first gave way, and they were

patched up; then the grates fell down; then the steering-gear was broken; then the smoke-pipe came down; and, finally, she sprang a leak and was run ashore. By this shipwreck ninety valuable horses were lost; some of them being thrown overboard ten miles from land, and others were left, as was said, to perish because no one would go down to the lower deck and untie them, that they might swim ashore. The gunboat Zouave was driven in the shallow water upon her own anchor, staved, and sunk. Her cargo was saved. A transport schooner went ashore on the outer bar. Each day during the storm more or less vessels of the fleet grounded, and every lull of the wind was improved by the tugs in dragging them off; though often while one set were being released others were driven into the mud, and thus there was constant labor, anxiety, and peril. The City of New York, a large transport screw steamer, with a cargo worth, as was said, two hundred thousand dollars, mostly ordnance stores, went ashore near the entrance to the inlet. Those on board were in the greatest peril. She struck on Monday afternoon, and swung around almost at once so as to lie nearly broadside to the sea among the breakers; the waves making a breach over her decks, and her officers and crew were obliged to cling to her rigging to prevent being swept overboard. Such was the violence of winds and waves that no assistance could be given her. On Tuesday her foremast was cut away, and when it fell it carried her pipes with it, and she became a perfect wreck. Those on board now lashed themselves to bulwarks and rigging, to prevent being washed away; and thus, without food or aid, in this awful peril, and yet in sight of so many friends, they passed another night. On Wednesday they were rescued, but the steamer and cargo were lost. The cargo consisted in part of some four hundred barrels of gunpowder, fifteen hundred rifles, eight hundred shells, Sibley tents, and hand-grenades. Communication between the ship and shore, and even between ship and ship, was much of the time very dangerous, and often impossible. A boat from the transport Ann E. Thompson, containing twelve persons, was swamped among the breakers, and Colonel Allen and Surgeon Weller, of the Ninth New Jersey, were drowned. The death of these much-esteemed officers cast a gloom over the whole fleet.

The harbor, as it was called, is nothing but the entrance to the inlet between the seaward bar and the inner "bulkhead," with only a narrow channel; and when this became crowded with vessels, as they came in from sea, it became a dangerous position for all. Notwithstanding they were anchored with two anchors, the violence of the tempest was such that they were often dashed against each other; and, although no vessel was entirely disabled, yet bulwarks, and guards, and wheel-houses, and light spars, were pretty generally smashed or injured. Some of the transports drew more water than their owners had represented, and this occasioned a fresh perplexity. How to get them over the "bulkhead" was a very serious question. All expedients of dragging, pushing, and lightening by throwing ballast overboard, were resorted to day after day, and yet the work went on very, very slowly indeed; and, though a part of the squadron reached the inlet by the middle of January, it was not till the 5th of February that all the army transports were safe across the "bulkhead" and ready to proceed up the sound. This exhausting and perilous labor was performed in mid-winter on a coast lashed, at that season, by continual storms; and it places in a most favorable light the courage and endurance of the soldiers and sailors of the expedition, as well as the skill and perseverance of the officers.

To understand the operations of the squadron and the difficulty of the work, something should be known of Roanoke Island, and its defences and strategic value. By the capture of the Hatteras forts, the Government obtained virtual control of Pamlico Sound; though some important points, such as Newbern, were still held by the rebels. The first object of this expedition, however, was to gain possession of Albemarle Sound and the connected waters, for then the rebels were carrying on an active trade, and through the shallow inlets on the north of Hatteras the small piratical craft already mentioned went out to prey upon our coastwise commerce. The rebels, therefore, had guarded the entrance to this sound by works of considerable strength. Between Albemarle and Pamlico Sounds there is a shallow connecting strait in which lies Roanoke Island. The sheet of water on the west of the island, between it and the main-land of North Carolina, is called Croatan Sound; that on

the east, between the island and the Atlantic, has the name of Roanoke Sound. Croatan Sound alone is navigable for large vessels. Roanoke Island, then, is the key to Albemarle and its connecting waters, to all coming from the south, and with that still in the hands of the rebels, the victory at Hatteras would have been but a partial triumph. Holding this island, the rebels could prevent Norfolk from being attacked from the rear; they could cover Weldon and the North Carolina railroads, and protect the communications of the army of Lee. All this is true, although the final movement into the interior of North Carolina was made from another point toward the close of the war.

Soon after the capture of the Hatteras forts, the rebels occupied Roanoke Island with a large body of troops, and strengthened, as much as possible, its defences; the works on land being assisted by a fleet of small sound-steamers armed with long-range guns.

The defences of this point consisted of six distinct works. Five of these guarded the water approaches and channel, and the sixth—a masked battery—was intended to prevent a land force from attacking the main works in the rear. This battery of three guns was planted on the only road leading up the island and toward Fort Bartow, the principal fort on the water at Pork Point. This battery was flanked on either side by a dense cedar-swamp, deemed impassable; and, as the rebels supposed that the only approach was over the narrow causeway in the face of the guns, they thought their position impregnable. To render it quite secure, they had felled the trees on either side of the road in a manner that would compel an enemy, as they believed, to march along the road, and under the short-range fire of the battery. It was a formidable work, but the rebels underrated the resource and pluck of Northern soldiers when they relied upon a cedar-swamp and fallen trees as their sole flank defences. This battery was stormed and taken by the Ninth and Fifty-first New York and Twenty-first Massachusetts, assisted by a six-gun howitzer battery from the fleet. By the time this battery was captured, the water forts and batteries had suffered so severely from the fire of the vessels that they were surrendered without much further resistance. In the assault upon this bat-

tery young Stearns, son of the president of Amherst College, was killed; and O. Jennings Wise, son of him who hung John Brown, was mortally wounded.

Going northward, Fort Bartow, on Pork Point, came next in order. It was a heptagonal work with five sides armed, mounting eight 32-pounder smooth-bores and one 68-pounder rifled gun. Fort Blanchard was situated a mile and a half farther north, a smaller work, mounting only four 32-pounder smooth-bore guns. About a mile beyond was Fort Huger, on Weir's Point. It mounted twelve guns, two 68-pounder rifles and ten 32-pounder smooth-bores. It was quite a formidable work, and constructed with very creditable engineering skill. Fort Ellis was a four-gun battery on the eastern side of the island, and intended to prevent the landing of small boats on that side. On the main-land, on the west side of Croatan Sound, and nearly opposite Fort Bartow, the fort on Pork Point, was Fort Forrest. It was composed of old hulks sunk in the sand, and merely intended as a flank defence to the line of obstructions which stretched across Croatan Sound, made of a double row of piles and sunken wrecks. A post-return found in Fort Bartow, dated January 29, 1862, states the condition of the armament as follows: "Forty long 32-pounders ready for action, and seven rifled guns, and ammunition for five days' action."

Behind the obstructions mentioned lay the rebel fleet of eight gunboats, mounting some seventeen guns, under the rebel Commander Lynch, who, like so many other Southern officers, had deserted his Government and the flag which had given him protection and honors. It will be seen that the number of guns of the Union forces was less than that of the enemy; while the advantage of position was altogether on the side of the rebels. Perhaps three-fifths of their cannon were in battery on shore, placed so as not only to enfilade the barricade across the channel, but accurately trained by measurement and experimental shots on the very points where the Union vessels were compelled to pass, and also where they must lie, at least for a time, arrested by the obstructions. Under the most favorable circumstances, it was necessary for our vessels to proceed very slowly, owing to the narrow channels and shallow waters. In addition to this, the vessels of the expedition were merchant steamers, slightly

built, compared with those of the Navy, and instead of being able to withstand the stroke of heavy shot, could not endure uninjured the firing of their own heavy guns. Yet this heavy armament was absolutely necessary to enable them to contend with the forts. The perils of the expedition were of course increased by the frail character of the ships, exposed as they were to the storm, the strain of frequent grounding in the shallow water, and the effect of their own guns.

These circumstances must all be considered in order to estimate aright the skill and persistent courage by which the obstacles were overcome, and victory in spite of them secured.

When, after weeks of incessant toil and exposure to winter storms on that most inclement coast, the vessels had been pushed or dragged through the crooked, narrow channels, or buoyed up and so floated over the shallows, and when such repairs as could be made on the spot, were finished on the boats shattered by the storms and collisions with each other, preparations were made to seek out and attack the enemy. Early on the morning of the 5th of February the signals for a general movement were displayed on board the flag-ship, the Philadelphia, and as soon as possible the whole fleet was under way. Two more boats, the Commodore Barney and Commodore Perry, had joined the squadron of naval vessels, making nineteen in all; and these, with the army transports, made quite an imposing appearance, as led by the naval division in three columns; they were headed toward Roanoke Island. Owing to the character of the navigation in these shallow waters, great caution was observed, and the progress of the squadron was necessarily slow. The columns were commanded respectively by Lieutenants Werden, Murray, and Davenport. It was found needful to send picket-boats ahead, not only to search out the channel, but to ascertain whether buoys had been removed, and where batteries had been erected.

The squadron might be said to grope its way through the sound, and especially through what is called the marshes, where the channel-way was so narrow as to admit only two vessels abreast. At sundown, on the 5th, they had only reached Stumpy Point, ten miles from the marshes; and there, like travellers on the land, they anchored and rested for the night.

Here a family, residing on the main-land, found itself subjected to temporary inconvenience and alarm by one of those incidents which belong to a state of war. They had watched the progress of the Yankee fleet during the day without feeling that they had any special personal interest in the matter beyond what every Southern felt in the success of their cause, and retired to rest thankful that so much water lay between them and the nearest of the squadron—a distance which they thought every hour of the night was increasing. Toward midnight the man was aroused, as he thought, by the call of some neighbor or a passing traveller; and, upon answering the summons, was greatly astonished to find himself in the midst of armed men who wore not the rebel gray, but the blue of the United States Navy, and whose weapons silently informed him that remonstrance or resistance would alike be in vain. The officer commanding the party politely informed him that the flag-officer of the fleet was very anxious to have the honor of his company on board his ship as soon as possible. This invitation, so strongly supported as it was by men and arms, could not well be resisted, and about midnight this guest was received on board the flagship, where he was given to understand that his knowledge of the sound and the adjacent country would be very serviceable to the fleet, and that it would be wise in him to communicate what he knew, and aid in conducting the squadron to its destination.

Early on the morning of the 6th of February the fleet was once more under way. Two light-draught steamers were kept about one mile in advance, in order to give timely notice either of the approach of the enemy's gunboats, or to discover concealed batteries or obstructions, if any existed. As the morning advanced, clouds and haze obscured both land and water, hiding all but objects near at hand, and rendering the advance of the fleet both difficult and dangerous. At about 10.30 A. M. the weather became so thick, and the wind was so fresh and accompanied with rain, that it was deemed imprudent to proceed, and the whole squadron was again anchored when about two miles from the narrow channel of the marshes. On Friday morning the weather was more favorable, and at 9 o'clock the fleet was once more under way, and headed for the marshes.

Three steamers, the *Ceres*, the *Putnam*, and the *Underwriter*, were sent ahead to reconnoitre, and particularly to ascertain whether there was a battery on Sandy Point, near Ashby Harbor, where it was intended to land the troops. At 10.30 A. M. the rebel fleet was in sight, drawn up behind the barricade already mentioned, formed of sunken vessels and a double row of piles. This barricade was flanked on one side by a fort on Pork Point, and on the other by a battery on Weir's Point. The rebel fleet numbered eight vessels, and they were supported by two other batteries. A signal-gun from one of these gunboats announced to the rebels the impending attack. The *Underwriter*, which was in the advance, signalled, "No battery on Sandy Point," and, as nothing appeared to hinder the carrying out the plan of battle already agreed upon, the squadron moved on. This plan was to land the troops at Ashby Harbor, on Roanoke Island, and assault the fort and batteries in the rear, while the fleet attacked the water-front and the rebel gunboats. The land approach to the fort was through wide marshes, through which the troops were obliged to wade sometimes nearly waist-deep in mud and water on a winter day, and exposed meanwhile to a sweeping fire of musketry and artillery served with both shells and grape.

The rebels had about five thousand troops on the island, enough not only fully to man the forts and batteries, but also to supply formidable bodies for operations in the field, where their knowledge of the country gave them decided advantages. Soon after the announcement that there was no battery on Sandy Point, the vessels of the navy, commanded as stated before, and accompanied by the Picket, Captain Thomas P. Ives; Hussar, Captain Frederick Crocker; Pioneer, Captain Charles E. Baker; Vidette, Captain John L. Foster; Ranger, Captain Samuel Emerson; Lancer, Captain M. B. Morley; and Chasseur, Captain John West, of the army division, and keeping in close order, had approached the enemy near enough to begin the attack. The following is an extract from the official report of the battle:

By noon, our vessels having approached still nearer, the action became general on their part and that of the enemy. At 1.30 P. M. the effect of our firing caused the barracks behind the fort at Pork Point to

burst into flames, and at 2.15 p. m. they were burning furiously, entirely beyond redemption. About this time our vessels being placed by their respective commanders as advantageously as circumstances would permit, the firing was the hottest. Throughout the sound lying between Roanoke Island and the main-land the depth of water at best is but little, and the bottom everywhere is essentially lumpy and irregular. Even at the distance of a mile and more from the shore where we had to approach, scarcely a general depth at low water of more than seven feet is to be found. With one or two exceptions, none of our vessels drew less than seven feet, and some of them drew rather more than eight. In placing them, therefore, so as to make their various guns to tell effectually, their several commanders had to exercise a sound discretion, and to keep in view the consideration due to the use of shells with fuses fixed in value as to time. To have used, for instance, a five-second fuse in shelling uncovered works at a less distance than about 1,400 yards, would not have secured the best results. Toward 3 p. m. the troops, embarked on board of light-draught steamers and boats, started to land at Ashby Harbor. The place was guarded by a large body of the enemy, with a field battery, but the Delaware, with Commander Rowan on board, and his division flag at her mast-head, having very judiciously taken up a flanking position to the southward of Pork Point, and thus, most opportunely, being near at hand, immediately turned her guns toward the harbor, and with some 9-inch shrapnels soon cleared the way. At 4.30 p. m. Pork Point battery, and the one next to the northward of it, ceased for a while to reply to our fire; five of the enemy's steamers, apparently injured, went back behind Weir's Point, and the first landing of our troops took place. At 5 p. m. those batteries again opened upon our vessels, and the enemy's steamers once more put forth and opened upon us. In about forty minutes, however, the latter were compelled a second time to retire. One of them, the Curlew, in a disabled condition, had taken refuge under the battery on Redstone Point. At 6 p. m., the firing of the enemy being only from Pork Point, and at long intervals, darkness coming on, and, not wishing to waste ammunition, I ordered the signal "Cease firing" to be made. In the course of the afternoon, our six launches, under the command of Midshipman Benjamin H. Porter, landed their howitzers and joined the army, for the purpose of commanding the main road and its two forks during the night, and assisting in more active operations the following morning. By midnight some 10,000 of our troops had been safely landed at Ashby Harbor, the Delaware having taken on board from the Cossack some 800, and put them on shore at 10 p. m.

February 8.—As it was arranged by General Burnside that his forces should move, at a very early hour this morning, from where they had been landed, and begin their attack upon the enemy; and, as the direction they were required to take would, in all probability, soon bring them in the line of fire occupied by the Navy, it was agreed between us last night that to-day the vessels should not renew operations until I could receive word from him that their missiles would not be destructive to both friends and foes. At daylight none of the enemy's vessels, except the Curlew, could be discovered.

At 9 A. M. a continuous firing in the interior of the island told us that our forces were hotly engaged about midway between Ashby Harbor and Pork Point battery, and, as this intelligence also assured us that our forces were not then in the range of our line of fire, our vessels, without waiting to hear from General Burnside, at once moved up to reengage the forts. At this work they continued until the firing in the interior evidently slackened. Then taking it for granted that our troops were carrying every thing before them, and thus fast approaching the rear of the batteries, I again ordered the signal "Cease firing" to be made. At the time, however, the work on Pork Point was so reduced that it did not use but one gun against us. Shortly afterward, on being informed by one of General Burnside's aides of the actual state of things on shore, I was induced to order another demonstration on the part of our vessels; but before firing had generally commenced, Commander Rowan came on board the Southfield just from General Burnside, with the suggestion that it would be better to desist, and accordingly they were recalled.

At 1 P. M., judging that the time had arrived for clearing a passage-way through the obstructions alluded to above, by the accomplishment of which both the battery on Redstone Point and the Curlew might be destroyed, and our advance up Albemarle Sound would be secured, the Underwriter, Valley City, Seymour, Lockwood, Ceres, Shawsheen, Putnam, Whitehead, and Brincker were ordered to perform the service. By 4 P. M. one of them had overcome the difficulty for herself, and reached the other side, and in less than an hour more a sufficient way for all the rest was opened. This important duty could not have been undertaken one moment earlier than it was without exposing our vessels, huddled together, to the converging and cross fire of the four batteries at Pork, Weir's, and Redstone Points, and another one situated between the former two. About the same time that our vessels succeeded in bursting through the barricades the American flag was hoisted over the battery at Pork Point, and in a few minutes afterward the

enemy himself fired the works at Redstone Point, and also the steamer Curlew. Both blew up in the early part of the evening. These events close the struggle, which had now lasted throughout two days, and were essentially the last scenes enacted in securing to us complete possession of the island of Roanoke.

A statement of the casualties that occurred will accompany this communication. They amount in all to six killed, seventeen wounded, and two missing. Considering how frequently our vessels were struck, it is remarkable that more did not take place; and considering the character of our vessels, it is also remarkable that none of them were even put *hors de combat*, except temporarily.

It now remains for me to discharge the gratifying duty of speaking of the officers and men under my command on the occasion in view. This, obviously, I can only do, as it were, in a collective way; but the reports of the commanding officers herewith submitted, upon which, necessarily, I have to rely, and in which I place every confidence, will be found more circumstantial. I beg to commend to your consideration the commanding officers themselves, who did their part entirely to my satisfaction, and, in fact, in a most admirable manner. The general order I issued the day after the surrender, a copy of which accompanies my preliminary report, was intended to convey applause and my profound gratitude to all to whom it relates, and I therefore beg that it may be so regarded by the Navy Department. I pray, too, that to the bereaved individuals whose support and comfort depended upon those who are now among the honored dead may be extended the earliest fostering care that circumstances will permit.

It is really difficult for me to state in adequate terms how largely I feel myself indebted to Commanders Rowan and Case for their constant and signal services throughout, from the very inception of the expedition to the consummation of the achievement in view. They, hand in hand, with their marked ability and sound sense, and in the absence of all ordinary facilities, brought about, at Hampton Roads, the arming, manning, and equipment of the many vessels sent to us, from necessity, in an unprepared condition; and subsequently they both labored most conspicuously and faithfully, in their respective spheres of action, to vanquish difficulties at the inlet and the enemy at Roanoke. In short, their assistance to me has been invaluable.

I am promised a report by General Burnside with regard to Midshipman Porter's association with his forces, and as soon as it comes to hand I will with pleasure forward it to the Department.

Although the Philadelphia did not participate in the action, because

of her unfitness for the purpose, still she ~~was~~ ever near at hand, in readiness, if necessary, to tow the disabled, receive some of the wounded, and furnish supplies. Her commander, Acting Master Silas Reynolds, is every way worthy of his trust.

Mr. Fisher performed the important duties of signal-officer in the most commendable manner. Not only were all the signals ordered promptly made, but no mistake whatever occurred.

Lieutenants Robeson and Barstow, of the Army, were ever in place, and ready, by means of Myers's system of signals, to make known to those not accustomed to our own code whatever I wished.

It will afford me peculiar pleasure, sir, to communicate to you in due season more particular information with regard to the cases of individuals which appear to me to merit a distinct consideration on the part of the Government.

I have the honor to be, sir, very respectfully, your obedient servant,

L. M. GOLDSBOROUGH,

Flag-Officer commanding North Atlantic Blockading Squadron.

Hon. GIDEON WELLES, Secretary of the Navy, Washington, D. C.

Great praise was due to General Burnside and the officers and men of his command for the promptness, energy, and persevering courage with which they performed their part of the work that led to this decisive victory, and it is pleasant to think that this praise was freely given by the country. The Army and the Navy labored together in harmony—each was necessary to the other, and to the success of the expedition. Without the Navy, the Army could not have even reached the forts, much less could they have captured them; and any attack of the squadron would have been useless without the coöperation of the troops and garrisons to hold the works after the victory. By the capture of these forts, and the troops stationed upon the island, free access to all the North Carolina sounds was gained for our squadron, so that in a short time the rebel power was swept from all these waters.

CHAPTER XXIII.

CAPTURE OF NEWBERN AND FORT MACON.

THE capture of Roanoke Island, and the destruction of the rebel squadron at Elizabeth City, were followed soon after by a combined attack of the Army and Navy upon Newbern, and the siege and capture of Fort Macon. Newbern is situated at the junction of the Neuse and Trent Rivers. The Neuse flows into Pamlico Sound. The city is eighty-four miles northeast of Wilmington, about the same distance south of Weldon, and one hundred and twenty miles from Raleigh, the capital of North Carolina. It is connected by railroad with Beaufort, and also with the main interior lines of the State leading south to Charleston and north through Weldon to Richmond. It is, therefore, a point of considerable importance, and in size is the second city of the State, its population having been at the beginning of the war about six thousand. The Neuse River at Newbern is about one mile and a half wide, and the Trent about half a mile. The importance of this city did not escape the attention of the rebel chiefs, and it was fortified with an expense and skill proportioned to its strategic value. The city could only be approached by an enemy from the south, and the south bank of the Neuse was protected by formidable earthworks, while obstructions were placed in the channel of the river, formed of sunken hulks, and an iron-pointed line of piles or *chevaux de frise*, which offered a dangerous resistance to our vessels. Torpedoes of an ingenious and elaborate construction were also planted in the channel. These obstructions were all commanded by heavy batteries. These works were: first, Fort Dixie, mounting four heavy guns, and about six miles

from Newbern. Next was Fort Thompson, a really formidable work, constructed upon scientific principles, and mounting thirteen heavy guns, two of them being rifled 32-pounders. Then came Fort Ellis, three miles from Newbern, mounting eight guns; then Fort Lane, two miles from Newbern, mounting also eight guns; and Union Point battery was one mile from the city, and mounted two guns.

If to this is added a description of the obstructions in the river, a general idea will be obtained of the defences of Newbern. These obstructions were placed a few miles only below the city. To form one of these, twenty-four vessels were sunk in a direct line. These varied in size from fifty to two hundred tons burden, two brigs, three barks, and nineteen schooners. They were locked together as perfectly as human ingenuity could do it, with their spars and rigging still standing and intertwined in every conceivable direction and manner. It seemed impossible that such a barricade could be sailed over or broken through. This line of defence was the one nearest the city. The other, lower down, and first encountered by our gunboats, was a much more dangerous affair. It was constructed by first driving a row of piles firmly across the channel, and these were cut off beneath the surface of the water. Another row of piles was added to these, but this second set were all pointed and capped with iron. They were also inclined at an angle of about 45 degrees down the stream, so as to pierce the hull of an ascending vessel. Near these was placed a row of thirty torpedoes, containing each about two hundred pounds of powder, quite sufficient to destroy any ship beneath which it should be exploded.

These dangerous machines were fitted with metal fuses, and trigger-lines attached to the pointed piles, so as to fire the torpedo by the striking of the vessel upon the timber. In addition to this a fire-raft, filled with cotton, which had been saturated with turpentine, had been prepared in the Trent River to send down against the fleet.

The elaborate and costly character of these various defences shows how great the importance of Newbern was in the estimation of the rebels; and when one considers the position and the strength of the six forts and batteries along the river, with their

well-constructed rifle-pits to protect them from a land assault, the dangerous obstructions in the river, the cotton-bale batteries on the wharf, and a movable battery on the railway track, it is astonishing that so little effectual resistance was made to the passage of the fleet and the approach of the Army. It was one of the many events of the war tending to reverse all former opinions in regard to the comparative power of ships and forts, where the ships are moved by steam, and are armed with shell-guns.

The expense incurred and the pains taken in fortifying, not Newbern only, but all the strategic points on these sounds and rivers of the South, show very clearly that the rebels deemed their security to be essential to the success of their cause, and just as clearly reveal the wisdom of the Government in its determination to capture them. It was reported that the obstructions at Roanoke cost four hundred thousand dollars, and those at Newbern were, in proportion to their extent, quite as expensive. Whatever the exact sum may have been, it is quite certain that a great amount of money and labor was expended upon the various works by which these waters were defended; and the persistent and costly efforts made to recover them after they had been captured by our forces prove how severely their loss was felt. The rebels evidently thought they had made them secure. They knew that none but vessels of light draught could be brought into the sounds, and they also knew that we had at first no small, strongly-built gunboats suitable for operations in these shallow waters, and that the light merchant steamers would soon be disabled by the fire of heavy artillery. Although they were sorely disappointed at the success so quickly gained by our flotilla of frail ships, they could not but expect that they would be rapidly disabled by successive battles; and this expectation was so far realized as to increase the difficulties and perils of our fleet with every fight in which they were engaged, having no means at command of making any permanent repairs. In each new battle, therefore, even though the rebel force was no greater than had been met before, the chances of success on our part were somewhat diminished, because our vessels were less staunch and reliable than at the beginning—not only injured, as most of them were by shot, but

strained by the discharge of their own guns. Under such disadvantages, our Navy and the land forces were obliged to fight the many battles of the sounds—battles in which skill and daring were most signally displayed, though they have been overshadowed by the more important and better known engagements of the war.

The general plan for the attack upon these works was for the troops to land at Slocum's Creek, about ten miles from Newbern, and march from that point to attack the batteries in the rear, if that were possible, while the fleet should precede the Army and bombard the forts and batteries as they should be successively reached. The manner in which this plan was carried out shows what courage and skill can do, and is one of many exploits of the Navy and Army on the coast of North Carolina which have received too little attention, overshadowed by the splendor of still more important victories.

On the morning of the 12th of March, 1862, the joint expedition left Hatteras Inlet, the naval division of the squadron as usual taking the lead. At about 2 o'clock in the afternoon the advance division of the gunboats entered the Neuse River, having had delightful weather in passing up the sound. Here the advance was stopped, and a steamer, the Lockwood, was sent to lie off the mouth of Pamlico River, as it was said that two steamers were up that river which might attempt to cut off any transports that should fall in the rear of the fleet. At about 4 o'clock, the fleet having been concentrated, it moved on cautiously, taking soundings in the unknown channel. At 5 p. m. they came in sight of the first line of obstructions, and a small steamer was discovered a few miles up the river. The Delaware was sent in pursuit of her, but she failed to overtake the chase, though she was driven under the guns of the batteries.

Soon after, the naval squadron came to anchor in three columns off Slocum's Creek, the point selected for the landing of the troops. In the morning four gunboats were stationed, two on each side of the mouth of the creek, to cover the landing, and keep up a fire with grape and shell upon the shore until the first brigade had landed. The landing was an unpleasant and difficult work, but bravely done. The men seemed regardless of fatigue and exposure. Such was the nature of the shore, that

they were obliged to flounder on from the boats as they could, through mud and water, sometimes waist-deep, and when all were fairly on solid ground they were already partly exhausted and ill prepared for the march before them. Six naval boat-howitzers were landed with the troops, and the manner in which the gunners suffered in the subsequent battle shows that they were in the hottest of the fight. After this fatigue and exposure of the landing, the troops marched twelve miles over roads deep with mud, then lay down in a rain-storm on low and marshy ground, to be waked for battle at daylight on the following morning. The boat-howitz battery did not reach the point until 3 o'clock in the morning. Such was the almost insuperable difficulty of dragging forward the guns.

So soon as the last brigade was embarked for landing, the flag-ship went up the river to reconnoitre Fort Dixie, the nearest work, and mounting four heavy guns. The fort opened fire upon the gunboat so soon as she came within range, which was quickly returned. General Burnside having desired to communicate with Commodore Rowan, the Perry took the place of the Delaware, and engaged the fort with a very effective fire until night, when a heavy fog set in. The plan of the assault was, that the fleet should attack the forts and shell the road in advance of the troops, and this was fully carried out in regard to the first battery, when night put an end to the operations. A part of the fleet was anchored for the night nearly abreast of the head of the army column. At daylight the fleet was again under way, and, upon opening fire upon Fort Dixie, it was found that the works had been abandoned; and a boat was sent on shore, and the American flag planted on the ramparts. The squadron then passed on and attacked Fort Ellis; but its magazine was soon blown up, and it, too, was abandoned. At this time the troops were engaged with the rifle-pits and field batteries in the rear of Fort Thompson. The squadron passed on and opened fire upon that fortification, and continued the fire until it was no longer returned by the fort, and then the flag-ship, having displayed the signal "Follow me," dashed at the first row of obstructions. It was a moment of intense anxiety, as she struck the line of piles, for the explosion of a torpedo was the thing expected, and for a moment few breathed as

they watched her. She glided safely through, however, and the rest pressed on. Several were injured by striking the iron-capped timbers, but for some reason not a torpedo was exploded. Just as the fleet was passing the line of piles, the troops rushed into Fort Thompson, having carried the works in the rear. The ships next attacked Fort Lane, but there was no response from her guns. The work had been deserted. The Valley City raised on it the Union flag, and all passed rapidly up the river. At the mouth of the Trent it was seen that two batteries were planted on the wharf, but they, too, were abandoned. They then steamed up the Neuse River to the city, and discovering three steamboats and one schooner endeavoring to escape up the river, the Delaware pursued and captured two and the schooner, but the other was run on shore and burned. At 12 M. the flag-ship was run alongside the wharf, and Newbern was taken possession of by Commodore Rowan.

The rebel officers had fired the city in several places, and the fire-raft having also been set on fire floated against the railroad bridge over the Trent, and that also was burned. At 2 P. M. the troops appeared on the south side of the Trent, and so soon as they could be transported across, they entered and held the town.

The following are some of the more important official reports of this successful expedition. The defence made by the water batteries of the rebels was a very slight one compared with their force, and the preparations which had been made. The fire from their rifle-pits and field batteries upon the troops was much more destructive; and, had not the garrisons been demoralized by the shells of the fleet, there might have been a different result, for the enemy had a large body of troops; they fought under cover, and were reënforced during the fight.

UNITED STATES STEAMER PHILADELPHIA, }
OFF NEWBERN, NORTH CAROLINA, *March 20, 1862.* }

SIR: I beg leave to submit the following detailed report of the attack upon Newbern and its approaches.

I left Hatteras Inlet on Wednesday, March 12, at 7.30 A. M., with the following naval force under my command: Philadelphia, my flag-ship, Acting Master S. Reynolds commanding; Stars and Stripes, Lieutenant Commanding R. Worden; Louisiana, Lieutenant Commanding

A. Murray; Hetzel, Lieutenant Commanding H. K. Davenport; Delaware, Lieutenant Commanding L. P. Quackenbush; Commodore Perry, Lieutenant Commanding C. W. Flusser; Valley City, Lieutenant Commanding J. C. Chaplin; Underwriter, Lieutenant Commanding A. Hopkins; Commodore Barney, Acting Lieutenant Commanding R. T. Renshaw; Hunchback, Acting Lieutenant Commanding E. R. Colhoun; Southfield, Acting Volunteer Lieutenant Commanding C. F. W. Behm; Morse, Acting Master Commanding Peter Hayes; Brineker, Acting Master Commanding J. E. Giddings; and Lockwood, Acting Master Commanding G. W. Graves. By 8 A. M. the naval fleet, together with the army transports, were steaming rapidly up the sound.

At 1 P. M. we made Brant Island, distant about twelve miles. At 2.10 P. M. the advance divisions of the gunboats having entered the mouth of the Neuse River, and being some miles in advance of the flag-ship, I made signal to stop, that the fleet might be concentrated. At this time General Burnside came alongside the flag-ship, and requested that one of our gunboats might be sent to the mouth of Pamlico River, intelligence having been received that two steamers were in that river. To guard against the possibility of an attempt by the enemy to cut off any of our transport vessels which might remain unprotected in the rear of the fleet, I dispatched the Lockwood to lie off the mouth of that river during the night.

At 3.40 P. M., having come up with the advance, signal was made to "Form line ahead," and the fleet again moved on, having now fairly entered Neuse River. At 5 P. M., the gunboats being now far in advance of the Army transports and in sight of the obstructions placed by the enemy in the river opposite to their batteries, a small steamer was discovered about six miles ahead, apparently reconnoitring. The Delaware was dispatched in pursuit. Failing to overtake the chase, but having driven her under the guns of the batteries, she returned. At 6.10 P. M. the naval fleet came to anchor in three columns off Slocum's Creek, the point decided upon for the debarkation of troops, and about fifteen miles distant from Newbern. Early the following morning (13th) I hoisted my pennant on board the Delaware. The Stars and Stripes and Louisiana were placed on the west side of the creek, and the Hetzel and Valley City on the east. At about 8 A. M. the troops started from the transports, and at the same time the gunboats, stationed as above, opened with grape and shell on the point selected for landing, the fire ceasing as the first brigade landed. At 9 A. M. six naval boat-howitzers, commanded, respectively, by Acting Master C. H. Daniels, United States steamer Hetzel; Mr. E. P. Mecker, United States steamer

Philadelphia; Acting Master J. B. Hammond, United States Steamer Hetzel; Mr. E. C. Gabandan, United States steamer Delaware; Lieutenant Tillotson, Union Coast Guard, and Lieutenant J. W. B. Hughes, Union Coast Guard—all under the command of Lieutenant R. S. McCook, of the Stars and Stripes—were landed to assist in the attack.

The Perry was moved up opposite the position of the battery in the interior near the railroad, with directions to open fire and unmask it. The Southfield was ordered to follow and take a position near the Perry. The Underwriter was soon directed to join them and use her rifle gun only. The Morse was stationed a mile below these vessels, and the Commodore Perry and Hunchback below the Morse.

As soon as the last brigade was embarked for landing, I went up the river with the Delaware, to make a reconnoissance of Fort Dixie. As I approached, the battery opened fire, which was returned, and the Perry coming up, a spirited and very effective fire was kept up by that vessel until dark, I having returned, at the request of General Burnside, to communicate with him.

Having dispatched the Delaware on special service, I returned to the Southfield, after having communicated with the general, and proceeded in that vessel to the Perry, which vessel was ordered to cease firing, as the night had set in with a heavy fog. The Southfield and Lockwood were anchored two miles below Fort Dixie, and, as near as I could judge, abreast of the advanced position of our forces, the Delaware joining me during the night.

At daylight on the morning of the 14th the report of a gun, supposed to be a field-piece, was heard. The Delaware, Hunchback, and Lockwood were immediately ordered to get under way. The fog being too dense to signalize, the Lockwood was directed to trace the land down and order up the vessels that had been stationed along the shore from our position to the point of debarkation. The Delaware and Southfield were ordered to move up and open fire on Fort Dixie. They were soon joined by the heavy ships from below, followed by the more distant vessels that had been guarding Slocum's Creek. Receiving no response from Fort Dixie, a boat was sent ashore, and the American flag raised on the ramparts. I then passed on up and opened fire on Fort Ellis, which was returned until the fort blew up. At this time our troops were pressing on the enemy's intrenchments in the rear of Fort Thompson. I made signal "Advance in line abreast," closed up toward the barriers, and opened fire on Fort Thompson and in direction of the sound of the enemy's fire in the interior. At this juncture an officer from General Burnside came down to the beach and informed me that

our shells were falling to the left and near our own troops. Changed direction and continued to fire, and advanced close to the barriers.

Fort Thompson having ceased to return our fire, I made signal "Follow my motions," and advanced through the first row of obstructions in "line ahead." As we passed the obstructions our troops appeared on the ramparts of the fort, waving the American flag. We threw a few shells into Fort Lane, but receiving no response, ordered the Valley City to raise the American flag on the remaining forts, and passed rapidly up the river in "line ahead." As we passed up, and on opening Trent River, two batteries were discovered, mounting two guns each, on the wharves in front of the city; both, however, were deserted. Passed up the Neuse River, and opened fire from the Delaware on some steamboats that were attempting to escape up the river, one of them having in tow a schooner loaded with commissary stores. One of the steamers was run in shore and burned; the other two, together with the schooner, were captured.

At about 12 M. I ran the Delaware alongside the wharf, and informed the inhabitants that we intended no injury to the town. At this time fires broke out in several portions of the city, it apparently being the intention on the part of the enemy to destroy it. Fire was also communicated to a floating raft in Trent River filled with bales of cotton, saturated with turpentine, which had been prepared to send down to the fleet. This drifting against the railroad bridge, set fire to and burned it.

The Louisiana and Barney were sent to the Trent side of the town in order to secure any public property that might be found there. Several hundred stand of arms and other munitions of war, and a large amount of naval stores, together with a large three-masted schooner, fell into our hands. At 2 P. M. our victorious troops appearing on the opposite side of the Trent, the work of transportation commenced, and at sundown the Army was in full occupancy of the city.

The obstructions in the river were very formidable, and had evidently been prepared with great care. The lower barrier was composed of a series of piling driven securely into the bottom and cut off below the water; added to this was another row of iron-capped and pointed piles, inclined at an angle of about forty-five degrees down the stream. Near these was a row of thirty torpedoes, containing about two hundred pounds of powder each, and fitted with metal fuses connected with spring percussion locks, with trigger-lines attached to the pointed piles. The second barrier was quite as formidable as the first, although not so dangerous. This was about a mile above and abreast of Fort Thomp-

son, and consisted of a line of sunken vessels, closely massed, and *chevaux de frise*, leaving a very narrow passage under the battery. In passing through these obstructions the Perry struck one of the iron stakes and carried the head of it off, sticking in her bottom. The Barney had a hole six inches long cut in her, and the Stars and Stripes was also injured; but fortunately the torpedoes failed to serve the enemy's purpose.

The forts, six in number (exclusive of those on the Trent), were well-constructed earthworks, varying in distance apart from one-half mile to one mile and a half, and mounting, in all, thirty-two guns, ranging from 32-pounders to 80-pounders, rifled, all *en barbette*, with the exception of one casemated fort, mounting two guns.

I forward herewith the report of Lieutenant McCook, commanding the naval battery in the battle of Newbern. The conduct of this officer, as also of the officers in command of the guns and their crews, is worthy of all praise. The list of killed and wounded in this little command, amounting to less than fifty all told, will show that where the hottest of the fire was there they were. It again becomes my pleasing duty to bear testimony to the gallant bearing of the commanders of the different vessels, their officers and crews. I must beg leave to express my grateful thanks for the able manner in which I have been supported by them. I am happy to add that no casualties occurred on board the vessels under my command during the engagement.

I have the honor to be, very respectfully, etc.,

S. C. ROWAN,

Commanding U. S. Naval Forces, Sounds of North Carolina.

Flag-Officer L. M. GOLDSBOROUGH,

Commanding North Atlantic Squadron, Hampton Roads, Va.

UNITED STATES STEAMER PHILADELPHIA, }
OFF NEWBERN, NORTH CAROLINA, March 19, 1862. }

SIR: I have the honor to submit the following detailed report of the operations of the battery under my command during the action near this place on the 14th instant.

In obedience to your order of the 13th, I took command of the naval battery of six howitzers, and on the morning of that day landed with the advance of the Army at Slocum's Creek. I was placed in the brigade and under the orders of General Foster, and at once moved forward to join him. The roads were very heavy, and in some places almost impassable, and had it not been for the assistance which was cheerfully rendered me by the Army, the pieces could never have gone

forward. We marched steadily forward till 9 o'clock at night, and then halted to rest. At 1 A. M. of the 14th we again moved forward, and at 3 A. M. reported to General Burnside, who ordered us to halt.

At daylight we resumed our march. At about 7 A. M. General Burnside ordered me to take a position in front of the left of the enemy's works. I moved the battery forward to the edge of the cleared space and deployed it to the left of the county road, opening fire at once with shell and shrapnel at a distance of about six hundred yards. Opposed to us and behind the breastworks was a battery of eleven field-pieces (six of which paid particular attention to us) and a number of riflemen, who annoyed us excessively whenever the smoke would lift clear of our guns. In attempting to drive these latter from the breastwork I advanced the battery some distance, firing canister, but was compelled to fall back to my original position, after having one gun disabled, an officer and several men wounded, and one killed.

For an hour and a half we maintained our position under a heavy fire of shell, grape, and musketry, when a gallant charge by our troops cleared the enemy from the breastwork. I at once moved forward into the work with three of my pieces and all my remaining ammunition. General Foster then ordered me forward with a portion of his brigade. When we had arrived within two hundred yards of the railroad a detached body of the enemy appeared in sight; the guns were at once prepared for action, and pointed toward a cleared spot on the opposite side of the railroad, that the enemy seemed to be making for. As they came into this open space I gave the order to fire, but, before the order could be executed, Acting Master Hammond rashly dashed forward in front of the guns and demanded their surrender. This demand they complied with, by throwing down their arms and holding up their hands in token of submission. The prisoners proved to be Colonel Avery and a portion of his command, the Twenty-fifth North Carolina regiment; they had been driven from the rifle-pits by our troops, and were endeavoring to make their escape. From this point I was ordered down the railroad to Newbern. Obtaining two cars, I placed my guns upon them, and reached the burning bridge to find our Navy in possession of the city, and the gunboats transporting the troops across the river.

The cheerfulness with which the brave men under my command dragged their guns through the heavy roads, part of the time exposed to a drenching rain, and the gallant manner in which they sustained the heavy fire of the enemy, is worthy of all praise. I would especially call your attention to the gallant conduct of Orderly Sergeant J. Men-

denhall, company B, Union Coast Guard; Seamen James Judge, George H. Mansell, John Williams, Charles Patterson, and Ordinary Seaman Duncan Douglass. These men, with the exception of Mendenhall, acted as captains of guns, and, from their intimate acquaintance with the howitzers, were of great service. The conduct of my officers was all that I could wish. Acting Masters Daniels and Hammond, of the Hetzel, rendered me most valuable aid; one gun in each of their sections was in charge of E. P. Mecker, of the flag-ship, and E. C. Gabandan, of the Delaware. To their coolness and courage all can testify. The gun in charge of Lieutenant Hughes, of company B, Union Coast Guard, suffered severely, and was finally disabled. During a portion of the engagement he loaded the gun himself, until carried away wounded. Mr. Daniels made an attempt to carry forward two of the captured pieces, but, after dragging them some distance, they stuck fast in the mud. Lieutenant Tillotson, of the Coast Guard, after firing away all his ammunition, left his section, and, I have since learned, was picked up by the retreating enemy.

On going into action I discovered that some of the men had straggled off, leaving me about fifty men to fight the guns. Among these, I regret to report the following casualties:

Killed.—Privates Arthur McGinnis and John Sheehy, company B, Union Coast Guard.

Wounded.—Second Lieutenant T. W. B. Hughes, Orderly Sergeant J. Mendenhall, Sergeant James C. Freeman, Corporal Thomas Riley, and Privates J. McDougal, S. T. Fonda, and Nicholas Mertz (yet missing), company B, Union Coast Guard; Seaman John Williams, Ordinary Seamen Jeremiah Sullivan, George Bushee, and Thomas Simmons. Total: killed, 2; wounded, 11.

I have the honor to be, etc.,

R. SHELDON McCook, *Lieutenant, U. S. Navy.*

Commander S. C. ROWAN,

Commanding U. S. Naval Forces in the Sounds of N. Carolina.

The next step of the Government, in repossessing itself of the harbors and fortifications of the Southern coast, was the capture of Fort Macon, a casemated work at the entrance of Beaufort Harbor. This work had mounted about fifty guns, some of them of long range and heavy calibre. In the reduction of this fortification the Navy bore only a subordinate part, as the strength of the fort rendered it necessary to prepare for a

regular bombardment by batteries established on shore. These batteries were planted about one mile from the fort, and were three in number, one mounting three 30-pounder Parrott rifles, one four 10-inch mortars, and a third four 8-inch mortars. These works were by no means completed without serious annoyance from the guns of the fort, but they were so far masked as to render uncertain the rebel fire, and they were finished without important loss. Fire was opened from these batteries on the 25th of April. The shore attack was seconded by the steamers Daylight, Commander Samuel Lockwood; the State of Georgia, Commander James F. Armstrong; the gunboat Chippewa, Lieutenant Commanding A. Bryson; and the bark Gemsbok, Lieutenant Edward Covendy.

The bark was of course obliged to anchor, but the steamers kept under way in a circle, delivering their fire in passing the fort at a distance of about one mile and a quarter. The sea was so rough that the vessels were compelled to cease firing after having been in action only about an hour. The Gemsbok, at anchor, had some of her rigging cut up, and the Daylight was struck by an 8-inch solid shot, which shattered some of her timbers, and wounded one man by a splinter. These were the only injuries received by the fleet, and yet the rebel fire was, under the circumstances, quite accurate, shot and shell falling all around and near the vessels, notwithstanding all but the bark were continually in motion. Toward evening a flag of truce was hoisted on the ramparts of the fort, and soon after it was formally surrendered and taken possession of by the troops under General Burnside. The articles of capitulation were signed jointly by General Burnside, and Commander Samuel Lockwood, the senior officer of the naval force at that point. The fall of Fort Macon nearly completed for the time the occupation of the sounds and coast of North Carolina, a work which was begun with the attack upon the forts of Hatteras Inlet by Commodore Stringham, and which went steadily forward with no serious reverse until the capture of Fort Macon. Still, after so much had been bravely done, the naval service upon these waters was one of continual toil and peril which the country will never properly appreciate, because not connected with great and brilliant battles. The statements made in regard

to the service upon the Potomac and adjacent rivers will apply with even more force to the work of the Navy on those of the coast and sounds of North Carolina. Both banks of these streams were occupied by a hostile population, and in many places they were so narrow that the channel was within rifle-shot from either shore, so that our vessels were exposed to every species of attack.

At every suitable point earthworks or batteries mounting heavy guns were established, field-batteries were transported from point to point, torpedoes were placed in the narrow channels, and ambuscades for riflemen were planted in the jungle and tall grass along the shore. The miasma of these marshy shores rendered this service far more unhealthy than that upon the open sea; and although the work of fever was far less deadly both for our soldiers and sailors in the South than the rebels hoped, still it largely increased the hazards of the service and the percentage of deaths beyond what these would have been in more northern localities.

In the minor expeditions and daily skirmishes there was very little glory to be obtained even by the officers, and none by the common sailor, and there were few prizes to compensate them somewhat for unusual effort, such as were won by the blockading squadron, and there was only devotion to the cause to keep the mind and body to the proper tone. That certainly was not a very inviting service in which, while threading the narrow channels and crooked rivers, men knew that at any moment a torpedo might blow them in pieces, or send them to the bottom, or a concealed battery might open upon them, or hidden riflemen sweep the deck. Yet these were the daily experiences of our seamen on our rivers, both East and West.

CHAPTER XXIV.

DESTRUCTION OF THE REBEL FLEET AT ELIZABETH CITY.

AFTER the battle at Roanoke Island, the rebel fleet, with the exception of the *Curlew*, which was destroyed, fled up the sound and took refuge in the Pasquotank River, whither our squadron immediately prepared to pursue them.

On the 9th of February a flotilla, under the command of Commander S. C. Rowan, and composed of the following vessels, entered Albemarle Sound in search of the rebel fleet: the *Louisiana*, Lieutenant Commanding Murray; *Hetzel*, Lieutenant Commanding Davenport; *Underwriter*, Lieutenant Commanding Jeffers; *Delaware* (flag-ship), Lieutenant Commanding Quackenbush; *Commodore Perry*, Lieutenant Commanding Flusser; *Valley City*, Lieutenant Commanding Chaplin; *Morse*, Acting Master French; *Lockwood*, Acting Master Graves; *Ceres*, Acting Master McDiarmid; *Shawsheen*, Acting Master Woodward; *Brincker*, Acting Master Giddings; and *Putnam*, Acting Master Hotchkiss. It was 3 o'clock in the afternoon when this fleet of rather diminutive men-of-war entered the sound, and soon after the smoke of two rebel steamers was descried. They were apparently heading for Pasquotank River. Signal was made to chase, and an attempt made to cut them off, but without success; and as night was coming, and the channel unknown, the chase was discontinued, and the vessels steamed on slowly over the bar, and then up the river, and about 8 o'clock in the evening it was deemed prudent to anchor for the night, ten miles distant from Fort Cobb, on Cobb's Point.

Although the Union fleet outnumbered that of the rebels, and although officers and men felt certain of success, the situa-

tion was by no means entirely satisfactory. It was ascertained that batteries were established at certain points on the river, but the exact strength of these was not known. The rebel vessels would be supported of course by these, for they could select the point of attack or defence, and our small, light steamers were ill-fitted to withstand heavy artillery, and some of them had been seriously injured already in the storms, by collisions and strain in getting over the bulkhead, and in the fight at Roanoke Island.

There was, then, a prospect of a contest which might be very serious in its consequences to these frail vessels, even though a victory should be won. Another fact in their case was still more perplexing to the officers. Their ammunition was reduced to twenty rounds for each gun, and a protracted conflict was therefore out of the question, for such a battle would necessarily end in the capture of their fleet.

Under these circumstances, Commanding Officer Rowan called on board his ship the officers in command, and having informed them of the nature of the case, conferred with them in regard to measures proper to be adopted. It was evident that a failure would cause the loss of nearly or quite all the advantages already gained, and postpone for an indefinite time the control of the sounds, so necessary for the progress of the cause of the Government. It was expected that the rebel fleet would take position behind the battery at Cobb's Point, and there await the attack of the Union squadron, with many and decided advantages on the side of the rebel commander.

After due consideration of the state of affairs, it was determined to organize the force in close order, so that the movement might be either a reconnoissance in force or a serious attack, as events should indicate. Each commander was enjoined most positively not to fire a single shot without direct orders; and in order to prevent any unnecessary use of ammunition, each one was directed to run his adversary down, if possible, and engage him hand to hand. All expected that the fight might prove a desperate affray, and the officers returned to their respective ships feeling the difficulties and responsibilities of their position, and thus prepared, as brave men ever are in such a case, to do what skill and courage may to insure success.

On the 10th of February, at daylight, the little fleet weighed anchor, and forming, proceeded in the prescribed order, the Underwriter, Perry, Morse, and Delaware keeping in advance as pickets, the little Ceres nearer shore on the right flank; the Louisiana and the Hetzel led up the remainder. The Valley City and the Whitehead, however, were ordered to leave the lines as soon as the battery was passed, and attack it in reverse. In this manner the squadron moved slowly and together up the river.

At half-past 8, A. M., the rebel steamers were discovered drawn up in battle order behind the battery, which, mounting four heavy 32-pounders, was quite a formidable work for such slightly-built steamers. On the opposite side of the river, the schooner Black Warrior, mounting two heavy guns, was moored. Beyond the battery and schooner lay the rebel gunboats, the whole force being under the command of Commodore Lynch in person. The enemy's line was drawn diagonally across the river in front of the town, the right resting on the battery, the left flank protected by the two large guns of the Black Warrior. So soon as the Union fleet came within long range, fire was opened on them both by the battery and the schooner, and this was immediately followed by the 80-pounder rifles from the rebel steamers.

To this fire the Union vessels, wisely considering the state of their ammunition, made no reply. Shot and shell passed over the foremost vessels and fell rapidly in the midst of the main columns, but they all pressed steadily but silently on, not a shot being fired in return. When within short range, the signal was made, "Dash at the enemy!" and every vessel was instantly put at full speed. The whole fleet then opened fire and swept forward as rapidly as their engines could drive them, and in a few minutes they were in the midst of the foe, startled and demoralized by so bold and unexpected a movement. A panic seized the rebels. They set the Black Warrior on fire, and deserted their battery as the steamers came abreast of it. The steamers beyond vainly endeavored to save themselves; their flagship, the Seabird, was run down and sunk by the Perry, Lieutenant Commanding Plusser, and her officers and crew were made prisoners. Some of the rebel boats were boarded and captured by hand-to-hand fighting on their

decks ; some were deserted and set on fire, the crews escaping as they could to the shore. Thus, in an action of not more than fifteen minutes' duration after our steamers opened fire and were put to their speed for the "dash," the sound fleet of the rebels was annihilated, and their control over the interior waters of North Carolina was gone, to be regained no more. It was one of the most brilliant and spirited little battles of the war, when quite as much skill and "dash" were displayed as in some of the bloodier conflicts that are more widely known.

It was well denominated a "dash." A whole fleet of steamers proceeding deliberately and in silence, though shot and shell were plunging and hissing around them, suddenly sprang, as it were, at full speed, and delivering their fire, "dashed" upon the foe, shattering them with a close-range fire, crushing in their sides, sinking some, and boarding and capturing such as could be rescued from the flames which the rebels themselves had kindled.

After the fight was over, a few of our steamers were sent up to Elizabeth City, and went alongside the wharves. At their approach a battery of field artillery made a hasty retreat down the street. A mounted artillery officer belonging to the Wise Legion, who, by the orders of General Henningsen, was compelling the inhabitants to set fire to their houses, was arrested and taken on board the flag-ship. As the evident intention was to charge the burning upon the Union forces, Commodore Rowan ordered all on shore to return to the ships, and suffered no communication for a time between the ships and shore. No houses were burned except those set on fire by the order of the rebel commander. A supply of fresh beef, bread, and flour was found in the commissary store-house, and these, as public property, were taken for the fleet.

Here, on a small scale compared with that at many other points, was exhibited the destruction wrought by war. The steamer Forrest, which had been disabled in the fight at Roanoke Island, one gunboat, and one lighter vessel on the stocks, were burned at the ship-yard. Then we are told that "competent engineers" were sent "to destroy the machinery, boilers, and railway;" then three days were "devoted to the destruction of the machinery of the Seabird and Fanny;" and if to

this is added the ruin of the fort at Cobb's Point, the vessels burned or otherwise destroyed in the battle, and eight cannon and a vessel on the stocks of Edenton, we get a glimpse of what the operations of war are. These steamers and other property thus destroyed were produced only by a large expenditure of labor and money; and what hundreds of men had wearily toiled to create, thus vanished in a day. It was a small exhibition of the wholesale ruin which the contrivers of the rebellion brought upon the people and property of the South.

Another step in cutting off the communications of the rebels was to obstruct the canals loading northward from the sounds toward the Chesapeake. Four of the squadron were sent forward by which this work was performed and the navigation of the canals was stopped. By these various operations, one of the main channels of intercourse and contraband trade between the rebels of the South and those along the Chesapeake and their more northern friends was destroyed, and the means of continuing the war were proportionately diminished. The first pressure which the rebellion seriously felt was thus brought to bear upon it by the Navy. From the moment that a secure lodgment was made upon the Southern coast at Hilton Head and the sounds of North Carolina, and the Navy had with its river gunboats opened a way for the advance of the armies into Tennessee, the rebellion was placed between two forces which were certain at length to grind it to powder. From that moment it was no longer a question whether the South would succeed, but merely how much longer the rebellion could be kept alive.

The error so long persisted in by the North in regard to the slave system protracted the struggle far beyond the natural limits of its life; but notwithstanding this, the rebel cause was a hopeless one from the moment of these first important successes of the Navy. Had the slaves been treated from the first according to the plainest rules of morality, or even of war, it would have saved thousands of lives and millions of money; but as the natives refused to do justice, there was no alternative but to suffer the fitting retribution. While the nation was slowly receiving the moral education which would enable it to perceive the design of God in the war, the Navy in the South, and

the Army and the Navy in the West, were preparing for the final triumph.

In order better to exhibit the share which each vessel bore in this gallant action, the following reports of commanding officers are added to the general statement. Such official documents serve to verify the narrative of the historian, and are freely used in the preparation of the work, even at the risk of some repetition, because thus only can all the facts be presented.

U. S. STEAMER HETZEL, CROATAN SOUND, N. C., *February 14, 1862.*

SIR: In accordance with your request, I beg leave to submit the following report.

Leaving this anchorage on Sunday, the 9th instant, in company with the rest of the light squadron, we stood up Albemarle Sound, and toward evening saw some of the enemy's steamers, which were pursued into the Pasquotank River, where we anchored about three miles inside.

At a little before 7 o'clock the next morning, got under way and stood up the river, presently discovering the rebel flotilla awaiting our approach above a four-gun battery on Cobb's Point.

The position in the column assigned to the Hetzel was such that it was not practicable, in this narrow stream, to fire at the enemy's steamers without endangering the lives of our companions; but we managed to get two shots at the battery and one at an armed schooner—the missiles of our opponents falling thick and fast around us.

At 9.10 A. M. answered general signal, "Make a dash at the enemy!" In fifteen minutes from this time the affair was finished, the battery deserted, and the flotilla burnt, sunk, captured, or put to flight. At 9.45 A. M. received on board, for surgical assistance, Acting Midshipman William C. Jackson, aged eighteen, mortally wounded while making his way to the shore from the captured steamer Ellis. He died at 10 P. M., and was buried on shore the next morning, with all possible solemnities. At 11.30 A. M. anchored off the battery, and sent Lieutenant Franklin with armed boat's crew to assist in its destruction.

In conclusion, I would respectfully call your attention to the coolness and gallant conduct of all under my command, who vied with one another in the steady and faithful performance of their duty.

I have the honor to be, etc.,

H. K. DAVENPORT, *Lieutenant commanding.*

Commander S. C. ROWAN, *U. S. N., commanding Flotilla, etc.*

U. S. STEAMER UNDERWRITER, OFF ELIZABETH CITY, *February 10, 1862.*

SIR: I have the honor to submit the following report.

This morning I steamed up the river toward Elizabeth City in the position assigned me. On arriving within less than a mile of the rebel battery and ships, when the general signal was made "Make a dash at the enemy!" I opened fire, and went ahead full speed. On nearing the ships, I directed the pilot to [put] this vessel alongside the Sea-bird; but on closing within a couple of hundred yards, I observed two steamers turning to escape, therefore passed on in pursuit. One of them was cut off, and, endeavoring to pass across my stern, was met by another vessel and captured. The other ranged ahead, keeping up a lively fire of musketry, which was returned with the 12-pounder rifle, but did not succeed in disabling her machinery, and she soon disappeared around a turn in the river.

Arriving in front of the town, a battery of horse artillery, standing at the head of Main Street, moved off. I went alongside the wharf, and remained until directed to drop down off the battery.

The occasion offered no opportunity for the display of individual gallantry—all merit my approbation. I, however, mention particularly Mr. Walter B. Griffith, master's mate, and Mr. John Cahill, second assistant engineer (acting chief); the former, as in the actions of the 7th and 8th, worked his rifled gun with coolness and precision. The latter was of great service in his own department, and also assisted at the after gun.

Ammunition expended: for 80-pounder rifle, nine shells; for 12-pounder rifle, eighteen shells and one stand of grape; for 8-inch gun, four shells; for 12-pounder howitzer, one shrapnel, two canister.

Respectfully, your obedient servant,

WILLIAM N. JEFFERS, *Lieutenant commanding.*

Commander S. C. ROWAN, U. S. N.

U. S. STEAMER DELAWARE, OFF ELIZABETH CITY, *February 11, 1862.*

SIR: I have the honor to submit to you the following report.

On the 9th instant, at 2.30 P. M., the United States naval flotilla, consisting of fourteen armed steamers, under your command, weighed anchor for Elizabeth City. Late in the afternoon two rebel steamers were discovered standing for Elizabeth City. The United States steamer Lockwood with this vessel immediately gave chase, but darkness prevented our overtaking them. At 8 P. M. the flotilla came to anchor, distant about fourteen miles from Elizabeth City.

On the morning of the 10th, at 6 A. M., signal was made from this ship for the flotilla to get under way, and at 8 A. M., when standing

on our course, discovered the enemy's gunboats, consisting of seven steamers and one armed schooner of two guns, a fine battery on our left of four guns, and one gun in the city facing us. When within range, signal was made in accordance to the orders of the commanding officer of the flotilla, to "make a dash at the enemy," which signal was again repeated within six hundred yards of the enemy, at the same time doing terrible execution with our guns, and filling the air with shot and shell.

At 9.25 A. M., precisely nineteen minutes from the time the first gun was fired, the schooner struck her colors, and was found to be on fire. About the same time the rebel flag on the battery at Cobb's Point was taken down and waved by the garrison; whereupon the rebel gunboats, with two exceptions, ran close in shore, and were instantaneously set on fire and abandoned by their crews, some of whom escaped in boats, and others jumping overboard, swam and waded to the shore.

I now gave the order to my acting aid, Assistant Paymaster F. R. Curtis, to have the cutter manned, and bring off the rebel flag for Commander Rowan, which was flying on board the rebel steamer Fanny. J. H. Raymond, acting master's mate, together with a part of his division, jumped into the boat with F. R. Curtis, and boarded the steamer Fanny, which was at the time on fire, hauled down the rebel flag, and then proceeded on shore to the battery, being the first to land, when the stars and stripes were planted by Mr. Raymond, amidst tremendous cheering from the flotilla; after which, in obedience to a recall, they returned on board this vessel, which was moored to the wharf at Elizabeth City at 9.45 A. M.; thus ending one of the shortest and most brilliant engagements that has occurred during this unfortunate civil war.

Too much praise cannot be awarded to the officers and men attached to this vessel for their gallant conduct during the action of the 10th instant. Great credit is due to our pilot, Nasa S. Williams, for invaluable services rendered during the engagement.

I am, very respectfully, your obedient servant,

S. P. QUACKENBUSH, *Lieutenant commanding.*

STEPHEN C. ROWAN, *commanding U. S. Flotilla, etc.*

U. S. STEAMER COMMODORE PERRY, ROANOKE ISLAND, *February 28, 1862.*

SIR: In the action of the 10th instant, at Cobb's Point battery, the battery, schooner, and steamers opened fire on us about 8 A. M. About 8.15 we commenced to return it, firing at the battery and Seabird alone. After passing the battery, we fired only at the Seabird. We ran her down, and took her officers and crew prisoners. In the col-

lision the ring-stopper of the anchor was snapped, and the anchor went to the bottom, which accident, together with the delay occasioned by receiving on board the prisoners, prevented us from making another capture. While engaged in receiving the prisoners, ten of the enemy's small steamers ran around very close to, firing at us with musketry, by which two of my men were killed and an officer wounded. The vessel was not struck by shot or shell. We fired fifteen shells, the greater number at the battery.

I have the honor to be, etc.,

C. W. FLUSSER, *Lieutenant commanding.*

Commander S. C. ROWAN, *commanding U. S. Naval Flotilla, etc.*

U. S. STEAMER VALLEY CITY, OFF ELIZABETH CITY, N. C., *February 10, 1862.*

SIR: I respectfully beg to submit the following report of the proceedings of this vessel in the action off this city on this day.

After steaming up the river until 8 o'clock yesterday evening, I came to anchor with the other flotilla about seventeen miles below Elizabeth City.

February 10.—At 6.30 A. M. got under way in obedience to signal, and stood up the river in company with the rest of the flotilla. When nearing the approaches of the city, received the fire of the rebel battery on shore. I immediately manned my port battery, and kept up a brisk return of the fire. A steamer and schooner, bearing the rebel flag, opened fire on our starboard bow; returned their fire with my starboard battery. A shell from the enemy, passing through both my boats, rendered them entirely unfit for service.

Upon signal "Make a dash at the enemy," increased the speed, and fired several brisk broadsides at the enemy's battery. A shell from the shore penetrated the side and passed through the magazine, exploding outside the screen on the berth-deck. Several of the powder divisions were severely scorched, the protecting bulkheads were torn to pieces, and the forward part of the berth-deck set on fire by the explosion. Ordered the pumps to be manned, and speedily got the fire subdued. In forty minutes from the commencement of the action, came to anchor within the precincts of Elizabeth City.

I take pleasure in again bearing testimony to the gallant conduct of the officers and crew of this vessel, and particularly I desire to bring under your notice the cool intrepidity and thorough practical seamanship displayed by master's mate J. A. J. Brooks, in manœuvring this vessel while under the hottest of the enemy's fire; also to the undaunted presence of mind of the gunner's mate, John Davis, who, while at his station in

the magazine, when the shell penetrated the side and ignited the berth-deck, as above reported, did cover a barrel of powder with his own person, thereby preventing an explosion, while at the same time passing powder, providing for the gun divisions on the upper deck.

I beg to enclose the surgeon's report of the casualties during the day.

I am, very respectfully, etc.,

J. C. CHAPLIN, *Lieutenant commanding.*

Commander S. C. ROWAN, *commanding Naval Flotilla, etc.*

U. S. STEAMER MORSE, OFF ELIZABETH CITY, N. C., *February 15, 1862.*

SIR: In obedience to your order of the 11th instant, I submit the following report of the operations of this vessel during the engagement of the 10th instant.

At 7 A. M., in obedience to signals, we got under way. Opened fire on the enemy with shells, at a distance of about three-quarters of a mile, maintaining a steady fire until the termination of the engagement; after which a few fragments of a shrapnel were found on deck, which, with a shot through the ensign, were the only ones received, neither killing nor wounding any person on board.

The officers and men behaved throughout with the utmost bravery and coolness. In all, thirteen shell and one shrapnel were expended.

I am, sir, very respectfully, etc.,

PETER HAYS, *Acting Master commanding.*

Commander S. C. ROWAN, *commanding Naval Flotilla, etc.*

U. S. STEAMER LOCKWOOD, ELIZABETH CITY, N. C., *February 12, 1862.*

SIR: I have the honor to forward the following report of the action at Elizabeth City on the 10th instant.

At 9 A. M. engaged the enemy, directing my fire upon their armed schooner until her crew deserted her, when I hauled across the river toward the Fanny, firing shrapnel and volleys of musketry. The enemy took to their boats (after setting fire to their vessel), and retreated under a heavy fire. I boarded as soon as possible with my boats, but found the fire too much spread to subdue; succeeded in capturing twenty stand of arms. Received a shot through our smoke-stack, and had our boat's davits unshipped by a spent shot; no one injured. The officers and men behaved nobly. Expended eight rounds of 80-pounder ammunition; four rounds of howitzer ditto; fifty rounds of buck and ball ditto.

Very respectfully, etc.,

G. W. GRAVES, *Acting Master commanding.*

Commander S. C. ROWAN, *commanding Naval Division.*

U. S. STEAMER WHITEHEAD, OFF ELIZABETH CITY, N. C., *February 10, 1862.*

SIR: I engaged the enemy this morning at 8.20; discovered a rebel schooner abandoned and fired, mounting two thirty-twos. Not being able to extinguish the fire, I scuttled her. I took from her six muskets; twelve boarding-pikes; books and papers of the rebel paymaster.

I expended during the action six shells. My officers and men behaved nobly during the fight.

Very respectfully, your obedient servant,

CHARLES A. FRENCH, *Acting Master commanding.*

Commander S. C. ROWAN, *commanding Naval Flotilla, etc.*

U. S. STEAMER SHAWSHEEN, OFF ELIZABETH CITY, N. C., *February 11, 1862.*

SIR: In obedience to your order, I have the honor to submit the following report of the part taken by this steamer, under my command, at the attack on Cobb's Point battery; also on a fleet of rebel gunboats and one armed schooner, stationed near by to support said battery.

On the morning of the 10th instant, thirteen of our gunboats were at anchor at the mouth of the Pasquotank River, having anchored there the preceding night. At 6.30 A. M. a sail was discovered crossing the mouth of the river, outside of the fleet, when some of the gunboats gave chase. I also got under way and stood out in pursuit, and, seeing her running for the land, I fired a shot across her bows, which brought her to, when the Seymour, being in advance of the other boats, took her in tow. She proved to be a schooner loaded with wood. I immediately stood up the river after the fleet, which had got under way, and was proceeding slowly up the river toward Elizabeth City. I soon overtook them. At 7.30 A. M. some rebel steamers were discovered ahead, apparently on the retreat. At 8 A. M. came in sight of the battery, and saw the steamers form in order across the river opposite. Our steamers advanced at a medium rate, when, being within about two miles of the battery, the steamers and armed schooners opened fire upon our fleet. At 8.30 A. M. the battery commenced firing, their shot reaching our steamers, but doing no injury, when our fleet ran up within good range. Signals were made by Commander Rowan on his flag-ship, the Delaware, to make a dash at the enemy, and fire at them at our discretion, when all the steamers went ahead at full speed, and opened on the enemy a well-directed fire, which fire was repeated in quick succession as we advanced. Their shot and shell fell rapidly among us, some of which took effect, but still we advanced on the enemy, which, with our fire, threw them into confusion, although they endeavored to make an able resistance; but when they discovered our intention to board, their men

left their guns, their steamers were headed toward the shore, and some of them set on fire—the flag on the fort's battery was hauled down and deserted—when our leading steamers made a most gallant manœuvre and ran them aboard, sinking two, capturing one, and the schooner was set on fire and deserted. I was running for the steamer *Fanny*, and being so near that all hands were ready to board and run, using muskets and small-arms at the retreating rebels, who waved a flag in defiance at us. As we were about to board her, discovered her to be on fire, and was ordered to back off from her by Commander Rowan, which I did, and followed other steamers in pursuit of one of the rebel steamers, which was making her escape by way of the canal. After chasing her some way up the canal, the chase was given up. Some of our steamers went up to the wharf, including the flag-ship *Delaware*. One new gunboat building and one old gunboat repairing were set on fire, and the city fired in several places. After remaining some time up at the city, I was ordered to anchor down near the battery on Cobb's Point, which I did, as did all the fleet soon afterward; having expended ten rounds of ammunition, for forward rifled gun, and fifty charges small-arm ammunition, and receiving no injury throughout the engagement. Permit me to add that all under my command, both officers and crew, worked with a determined will worthy of themselves and the noble cause in which they are engaged.

I have the honor to be, etc.,

THOMAS J. WOODWARD, *Acting Master commanding.*

S. C. ROWAN, *commanding Albemarle Flotilla.*

U. S. STEAMER HENRY BRINKER, OFF ROANOKE ISLAND, *March 1, 1862.*

SIR: I have the honor to report the part taken by the vessel under my command in the engagement at Elizabeth City, on the 10th instant.

At 8 A. M. (the enemy's gunboats being in sight) was in the position assigned me by my commander, in the rear of the first division.

Owing to my position, I was unable to fire with either safety to our own vessels or effect on the enemy, until nearly opposite the battery on Cobb's Point, when we fired three shots at the schooner and battery on the northern shore of the river. The schooner, ceasing to fire, approached the battery. Had fired but four shots when the order to "make a dash at the enemy" was given by the flag-ship *Delaware*. Closed in, but had no opportunity to engage, the enemy being completely routed by the vessels in advance. Came to anchor near the bar, above Cobb's Point, and awaited orders. Ammunition expended, seven rounds;

casualties, none. The vessel was not struck by the enemy's shot. My officers and crew behaved with their usual gallantry.

I have the honor to be, etc.,

JOHN E. GIDDINGS, *Acting Master commanding.*

Commander S. C. ROWAN, *commanding Naval Forces, Albemarle Sound.*

UNITED STATES STEAMER GENERAL PUTNAM, }
OFF ELIZABETH CITY, February 11, 1862. }

SIR: As I have the honor to report to you the proceedings of yesterday, I regret to say that, owing to the bad condition of our boiler, and consequently the slowness of my boat, I did not arrive in time to take a part in the action, but rendered assistance in getting the Ceres and her prize afloat, they both being ashore; then steamed up to the city, and received orders to anchor below. Sent a boat to put out the fire of the armed schooner, but the fire was too far advanced to be subdued. Seeing a flag of truce on shore, I sent a boat and brought off a man, who was one of the crew of the schooner which was burnt. He claims to be a pilot through all the waters of North Carolina.

Very respectfully, your obedient servant,

WILLIAM J. HOTCHKISS, *Acting Master commanding.*

Lieutenant DAVENPORT, *commanding Third Division.*

ORDER.

UNITED STATES STEAMER DELAWARE, }
OFF ELIZABETH CITY, February 11, 1862. }

The commander of the flotilla in Albemarle Sound avails himself of the earliest moment to make a public acknowledgment of the coolness, gallantry, and skill displayed by the officers and men under his command in the capture and destruction of the enemy's battery and squadron at Cobb's Point. The strict observance of the plan of attack, and the steady but onward course of the ships, without returning a shot until within three-quarters of a mile of the fort, excited the admiration of our enemies.

The undersigned is particularly gratified at the evidence of the high discipline of the crews in refraining from trespassing in the slightest degree upon the private property of defenceless people in a defenceless town. The generous offer to go on shore and extinguish the flames applied by the torch of a vandal soldiery to the houses of their own defenceless women and children is a striking evidence of the justness of our cause, and must have its effect in teaching our deluded countrymen a lesson in humanity and civilization.

S. C. ROWAN,

commanding Flotilla, Albemarle Sound.

CHAPTER XXV.

EXPEDITIONS TO HAMILTON, WASHINGTON, AND FRANKLIN.

SEVERAL of the rivers that empty into the Southern sounds are navigable for some distance from the mouth, and at or near the head of steamboat navigation are small towns which the rebels had fortified, not alone to secure their trade from interruption, but with the intention of accumulating at these points military stores, and of constructing war-vessels where they would be safe from attack. All such locations it was necessary to examine. One of these was Hamilton, on the Roanoke, and against this a small expedition was sent on the 9th of July, 1862.

It consisted of the Commodore Perry, Lieutenant C. W. Flusser; the Ceres, Lieutenant John McDiarmid; and the Shaw-sheen, Acting Master Thomas J. Woodward. These steamers had on board forty soldiers, in addition to their crews. The river has in various places high banks and bluffs, where riflemen could be concealed, and where batteries could be established, or field artillery placed in ambush, and where they would be comparatively safe from the fire of the gunboats.

At 12 o'clock the steamers reached a barricade, which, however, was passed without difficulty. At 1 p. m., while passing some high bluffs, they were suddenly attacked by concealed riflemen; and although this fire was promptly returned both with muskets and cannon, it was impossible to do the rebels much damage, sheltered as they were on the bluffs. For two hours these steamers, compelled to run slowly, were held under the fire of these sharpshooters that were stretched along the bank in small companies, the officers pushing on toward

Hamilton in obedience to orders, their men struck down around them by an invisible foe, upon whom an almost random fire produced of course but little effect. Such battles, when steamers with their crews and troops were exposed at short range to ambushed riflemen, were among the most dangerous and trying of the service. Brave men are expected to stand without flinching against a visible foe, but it requires unusual courage and the highest order of discipline to fight with coolness an unseen enemy, while conscious of being constantly exposed to him, and within range of his weapon. Of the little band on these boats ten were wounded and one killed. Some of the wounded died after the fight.

Below Hamilton a deserted battery was found, and in many other instances the rebels deserted the less important batteries after the capture of the forts at Hatteras Inlet and Roanoke Island. The rebel steamer Wilson was captured at Hamilton. The little fleet returned, shelling the banks as it proceeded, but without being fired upon again.

In the latter part of October a second expedition against Hamilton was planned by the Army then under General Foster, who requested the cooperation of the Navy. On the 30th of October the United States steamers Commodore Perry, Hunchback, Valley City, and the Army gunboat Vidette were at anchor off Plymouth, while the Shawsheen was on picket-duty about six miles up the river. It was ascertained that a body of about three thousand rebels were posted some two miles from the town. It was agreed between the commanders of these vessels and Captain Hammill who commanded the post that an attempt should be made to shell them out of their position.

The next day the plan was carried out, and it afforded one of the thousand examples of the efficacy of the shell-gun. The town lay between the steamers and the rebel camp, and solid shot would have effected little, even if they could have been safely used. But the shell was a very different weapon. At mid-day the five gunboats opened fire simultaneously, and the shells, arching over the town harmlessly, burst two miles away in the woods where the rebel army was posted. Such operations have become familiar things in modern war; so that

we do not pause to think what an exhibition of skill and science it is for a fleet to lie abreast of a town, and with its guns seemingly trained directly on its streets, shake the whole city with the thunder of its broadsides, and yet send every missile curving over the heads of the population, to deal out death only to those who were miles away. The result of the shelling was that the rebel encampment was broken up, and they were driven from their position.

On the 2d of November dispatches were received from General Foster requesting an interview at Williamston, and to that point the little squadron repaired, and there met General Foster and the troops intended for the expedition against Washington. General Foster had met a body of rebels five miles below, who endeavored in vain to oppose his advance.

It was agreed that they should begin their joint advance upon Hamilton that night. At 7 p. m. the fleet was got under way, the Valley City leading, and followed by the Perry, Hetzel, and Hunchback, one gunboat having been sent to Plymouth during the afternoon with sick and wounded soldiers. At 1 o'clock on the morning of the 4th the squadron reached one of those barricades which were thrown across nearly every navigable channel of the South, and which the rebels thought would effectually stop the progress of our vessels. This obstruction was at a point called Rainbow Bluffs, and eight miles from Hamilton. Here the fleet anchored for the night, with the double purpose of avoiding the danger of passing the barricades in the darkness, and of waiting for the signal from the advance of the Army. At 11 A. M., not having then heard any thing from the Army, the gunboats again proceeded up the river. The main objects of this expedition were to destroy any works that might be found on the river, and to ascertain whether any iron-clads or other vessels were being constructed at any points. Some earthworks were found at Rainbow Bluffs, which the troops took possession of in their march, and which the crews of the gunboats destroyed. The Army endeavored to reach Tarborough, but failing in this object, turned back, and the gunboats returned to Plymouth, taking with them about three hundred sick and disabled soldiers. This service, so often performed by the Navy where unarmed trans-

ports could not pass, was of immense importance to the Army, facilitating its operations, and saving many lives that must have been lost by the common method of army transportation.

In fact, no operation of an army was possible either in the South or the West without the constant assistance of the Navy. Every expedition needed not only transports but the protection of armed vessels; and then the defences of the lines of approach were such that, as in the cases already mentioned, it was necessary that they should be reduced by the heavy guns of the Navy. Moreover, without the presence of our fleets to hold in check, capture, or destroy the steamers of the rebels, they could have recaptured the forts on the sounds and rivers in the same manner that our own gunboats had done. Not a single point on the Southern coast could have been wrested from the rebels except by the assistance of the Navy, nor, on the other hand, could they have been retained without the coöperation of troops.

This coöperating work of our ships at all points where the Army was present, forming everywhere a firm support, was really more important in the conduct of the war than the great battles; and yet this continuous, perilous, and exhausting labor of the officers and sailors is precisely that of which the country has heard the least.

In the latter part of September, 1862, a joint expedition of the Army and Navy was prepared against Franklin, a small town on the Blackwater River. The Army at this time was under the command of Major-General Dix. Between him and the officers commanding the gunboats it was agreed that the attack should be made on the 3d of October.

At 5.45 on that day the steamers *Commodore Perry*, *Hunchback*, and *Whitehead*, which during the night had been lying at anchor three miles below Franklin, got under way, and proceeded up the river. The river is so narrow and so crooked in places, that even these small steamers could not safely turn round the bends without the aid of hawsers; and the woods and bluffs were well adapted to conceal an ambushed foe, and shelter them from shot. At 7 o'clock the *Perry*, being ahead, came to one of these short bends in the stream, and, while engaged in running out a line to enable her to turn, a

heavy fire was opened upon her from the bluff above by a body of concealed riflemen. The guns of the steamer could not be brought to bear, on account of the height of the banks, and the only method of escape seemed to be to steam rapidly past. This was attempted, but in turning, the gunboat ran ashore. At this moment a daring color-bearer dashed out from the rebel cover, trying to urge on his comrades to board the steamer, but was almost instantly shot down, and the attempt was defeated. In a few minutes the gunboat was once more afloat and passing ahead until her guns would bear. She opened a fire with grape and shell, canister and shrapnel, her decks in the mean time being constantly swept by rifle-balls with deadly effect. Her fire, however, served to cover the Hunchback as she rounded the bend, and she in turn protected the Whitehead in similar manner.

The steamers all succeeded in getting round the bend, but only to find themselves still under a most destructive fire from the rifles of the concealed enemy; while a barricade, which, under such circumstances, could not be removed, prevented their further progress up the river. In the mean time, another body of the enemy had collected below, and were working in all haste to fell trees across the river in the rear of the gunboats, to prevent their return, evidently expecting to enclose them between the two barricades and capture them all. The situation was indeed a critical one, for it was very difficult to work the guns under the fire of the riflemen without an unwarrantable loss of life; and should their return be cut off by the fallen timber, there seemed no way of escape. Expecting, however, to hear the guns of the land forces, they fought on.

The leading steamer, the Perry, threw 9-inch shells toward Franklin; with the forward 32-pounder she poured grape and canister into the woods on her left; with the after 32-pounder and field-gun she fought the rebels on the right; and with the after 9-inch gun she shelled the bluff from whence the heaviest fire proceeded. Thus gallantly the little gunboat met her enemies on all sides, her men exposed every moment to a deadly fire from the riflemen concealed in every direction round her.

At a quarter past 10 o'clock the steamers started down the river, but were all swept with volleys of rifle-balls again from

the bluff as they passed, and for more than two hours longer they were fired upon from every point from which a shot would reach. The men were kept under shelter as far as possible, or the loss would have been much greater, large as it actually was, for the crews of three small steamers. Under a full head of steam they forced their way through the fallen timber, and thus passed out of fire. In this action the Perry was commanded by Lieutenant C. W. Flusser. In order to show more fully its severity, and illustrate the nature of this river service, the following official reports are subjoined:

UNITED STATES STEAMER COMMODORE PERRY, *October 3, 1862.*

SIR: I have the honor to inform you that the following is a correct report of the killed and wounded on board the United States steamer Commodore Perry, while engaged with the enemy on the Blackwater River, near Franklin, Virginia, on the 3d day of October, 1862.

Killed.—John Lynch, master's mate, rifle-ball through the heart; Justin Baker, quartermaster, rifle-ball through the head.

Wounded.—John W. Johnson, landsman, arm shattered by rifle-ball; George Nicholas, able seaman, rifle-ball through the head; James Brown, captain's steward, rifle-ball through the hand; John Dowling, able seaman, rifle-ball wound through the posterior; William Cornell, able seaman, rifle-ball in the neck; James McManis, fireman, bayonet-wound in the leg; Isaac Fisher, private, Ninth New Jersey regiment, rifle-ball through the body; Peter Gilghassen, private, Ninth New Jersey, rifle-ball through the thigh; John E. French, private Ninth New Jersey regiment, rifle-ball, slight wound in the forehead; William Bucklin, private, Fourth Rhode Island regiment, rifle-ball, slight, in the neck.

Very respectfully, your obedient servant,

GEORGE W. GALE, *Acting Assistant Surgeon U. S. Navy.*

C. W. FLUSSER, *Lieutenant commander.*

UNITED STATES STEAMER COMMODORE PERRY, *October 16, 1862.*

SIR: We expended, as near as I can determine, in the fight of the 3d: 9-inch shells, 102; 6-inch shells, 54; stand of grape for 9-inch gun, 16; stand of grape for 6-inch gun, 27; stand of canister for 6-inch gun, 26; rounds of ammunition for the howitzer, 94. Total amount of ammunition expended, 319.

Respectfully submitted,

WM. B. CUSHING, *Lieutenant.*

Lieutenant Commander C. W. FLUSSER,

commanding United States Steamer Commodore Perry.

UNITED STATES STEAMER HUNCHBACK, }
OFF PLYMOUTH, NORTH CAROLINA, October 6, 1862. }

SIR: The following is an account of the part taken by this vessel on the Blackwater on Friday, the 3d instant.

I got under way at 5.30 A. M. from our anchorage, about four miles below Franklin, following your vessel closely—the Whitehead being astern of us. When the enemy opened a heavy fire of musketry on you, I pushed ahead to your support. The river being very narrow at that point, and the turn “short around,” I found great difficulty in turning the bend, being detained there nearly half an hour under a heavy fire of musketry and one shot from artillery, which latter killed two men—a grape-shot passing through both, killing them almost instantly. From that time until 10.30 A. M., when we had fought our way to a point within three-quarters of a mile of Franklin, the fighting was the same—here and there high banks with dense foliage, a narrow and very crooked stream, with frequent heavy firing of musketry.

On our passage down we met with even a warmer reception, the enemy seeming determined to capture us—having, as you are aware, cut down large trees to close up the river. We were not idle all that time; but whenever I could fire my 9-inch guns without exposing the men, I let them have shell, shrapnel, and grape; and when the firing of the enemy was so hot that I could not expose the men, I worked my two howitzers in the gangway, giving directions through the speaking-tube in the pilot-house how to fire. I cannot speak too highly in praise of the officers and men under my command. They did their duty nobly. I have to regret the loss of one of my best men, James Ritchie, boatswain's mate, who was killed when about to sight his gun. I would bring to your notice the heroic conduct of Thomas C. Barton, seaman, who, when a shell, with cartridge attached, fell out of the howitzer upon the deck—the charge, which must have been wet, being ignited—got a bucket of water and threw it upon it, thereby preventing its explosion.

Our loss, as will be seen by the report of Acting Assistant Surgeon George R. Mann, was: killed—James Ritchie, boatswain's mate, and Frank Davis, contraband; wounded—Samuel B. Sharp, seaman, left arm. We fired from the 9-inch guns 22 shells, 10 shrapnel, and 1 stand of grape; from the 100-pounder rifle, 9 percussion shells; and from the howitzers, 9 stand of grape, 27 shrapnel, 28 shell, and 26 canister—making a total of 132. Very respectfully, your ob't servant,

EDMUND R. COLHOUN,

Acting Lieutenant commanding U. S. Steamer Hunchback.

Lieutenant Commander C. W. FLUSSER, U. S. N.,

commanding Naval Forces, Albemarle Sound, N. C.

LOSS OF THE STEAMER ELLIS.

The destruction of this small steamer presents an example of the desperate character of the fighting in which our river gunboats were often engaged, and the story cannot perhaps be better told than in the words of the young officer who commanded, the same who afterward blew up the rebel iron-clad Albemarle at Plymouth.

UNITED STATES STEAMER HETZEL, *November 26, 1862.*

SIR: I have the honor to report that I entered New River Inlet on the 23d of this month, with the United States steamer Ellis under my command; succeeded in passing the narrow and shallow place called the Rocks, and started up the river. My object was to sweep the river, capture any vessels there, capture the town of Jacksonville, or Onslow Court-House, take the Wilmington mail, and destroy any salt-works that I might find on the banks. I expected to surprise the enemy in going up, and then to fight my way out. Five miles from the mouth I came in sight of a vessel bound outward, with a load of cotton and turpentine. The enemy fired her to prevent her falling into our hands. I ran alongside, made sure that they could not extinguish the flames, and again steamed up the river. At 1 P. M. I reached the town of Jacksonville, landed, threw out my pickets, and placed guards over the public buildings.

This place is the county-seat of Onslow County, and is quite an important town. It is situated on the right bank of the river going up, and is thirty-five or forty miles from the mouth. I captured twenty-five stand of public arms in the court-house and post-office, quite a large mail, and two schooners. I also confiscated the negroes of the Confederate postmaster. I forgot to mention that the town is situated on the main dirt-road to Wilmington. Several rebel officers escaped as I neared the place and carried the news to that city. At 2.30 P. M. I started down the river, and at 5 P. M. came in sight of a camp on the banks, which I thoroughly shelled. At the point where the schooner captured in the morning was still burning, the enemy opened fire on the Ellis with rifles, but were soon silenced by our guns. I had two pilots on board, both of whom informed me that it would be impossible to take the steamer from the river that night. High water and daylight were two things absolutely essential in order to take her out. I therefore came to anchor about five miles from the outer bar, took my prizes alongside, and made every preparation to repel an attack. All

night long the signal-fires of the enemy could be seen on the banks. At daylight I got under way, and had nearly reached the worst place in the channel, when the enemy opened on us with two pieces of artillery. I placed my vessel in position, at once hoisted the battle-flag at the fore, the crew gave it three cheers, and we went into action. In one hour I had driven the enemy from his guns and from the bluff, and passed within a hundred yards of their position without receiving fire. Up to this time I had been in every way successful, but was here destined to meet with an accident that changed the fortunes of the day, and resulted in the destruction of my vessel. About five hundred yards from the bluffs, the pilots, mistaking the channel, ran the *Ellis* hard and fast aground. All hands went to work at once to lighten her, and anchors and steam used to get her afloat, but without success. The headway of the steamer had forced her over a shoal, and into a position where, as the centre of a circle, we had a *circumference of shoal all around*. When the tide fell, I sent a party ashore to take possession of the artillery abandoned in the morning, but when they reached the field it was discovered that it had been removed while we were at work on the vessel. If I had secured this, I proposed to construct a shore battery to assist in the defence of my vessel by keeping the rebels from placing their batteries in position. At dark I took one of my prize schooners alongside, and proceeded to take every thing out of the *Ellis* excepting the pivot-gun, some ammunition, two tons of coal, and a few small-arms. Steam and anchor again failed to get my vessel afloat. I felt confident that the Confederates would come on me in overwhelming force, and it now became my duty to save my men. So all hands were called to muster, and the crew told that they could go aboard the schooner. I called for six volunteers to remain with me on board and fight the remaining gun. Knowing that it was almost certain death, the men came forward, and two master's mates, Valentine and Barton, were amongst the number. These gentlemen subsequently behaved with coolness and bravery. I ordered the schooner to drop down the channel out of range from the bluffs, and there to wait for the termination of the impending engagement, and if we were destroyed to proceed to sea.

Early in the morning the enemy opened on us from four points with heavy rifled guns (one a Whitworth). It was a cross-fire, and very destructive. I replied as best I could; but in a short time the engine was disabled, and she was much cut up in every part; and the only alternatives left were surrender or a pull of one and a half miles under their fire in my small boat. The first of these was not, of course, to be thought of; the second I resolved to attempt. I fired the *Ellis* in five

places, and, having seen that the battle-flag was still flying, trained the gun on the enemy, so that the vessel might fight herself after we had left her and started down the river, reached the schooner, and made sail for sea. It was low water on the bar, and a heavy surf was rolling in, but the wind forced us through after striking several times. We were just in time, for about six hundred yards down the beach were several companies of cavalry trying to reach the mouth of the inlet in time to cut us off. We hoisted our flag and gave three cheers, and were off. In four hours I reached Beaufort. I brought away all my men, my rifled howitzer and ammunition, the ship's stores and clothing, the men's bags and hammocks, and a portion of the small-arms. I retained aboard a few muskets, pikes, and pistols, to repel boarders.

I neglected to state that when I took possession of the enemy's ground, on the 24th, a salt-work was destroyed, and ten boats rendered useless that were to have been used for boarding. At 9 A. M. the United States steamer Ellis was blown in pieces by the explosion of the magazine. Officers and men behaved nobly, obeying orders strictly under the most trying circumstances. I respectfully request that a court of inquiry may be ordered to investigate the facts of the case, and to see if the honor of the flag has suffered in my hands.

I am, sir, very respectfully, your obedient servant,

WILLIAM B. CUSHING, *Lieutenant.*

Commander H. K. DAVENPORT,

Senior Officer, commanding in Sounds of North Carolina.

CHAPTER XXVI

EXPEDITION TO HILTON HEAD, AND CAPTURE OF THE FORTS.

THE capture of the forts at Hatteras Inlet was only a partial execution of the plan which the Government had formed in regard to the occupation of the Southern coast. The reports of the Board, mentioned in the preceding chapter, covered the whole seaboard from Hampton Roads to the passes of the Mississippi. Acting under their suggestion, the first point aimed at was Hatteras Inlet. In connection with other methods, it was recommended, though not by this Board, that the inlets should be obstructed by sinking old vessels, loaded with stone, in the channels; but this, upon trial, was found to be of little consequence, for the water, obstructed at one point, opened for itself a new channel. The English journals, in their extreme and tender solicitude for the rights and interests of the rebels, made energetic protests against the attempt to seal up in this manner the harbor of Charleston against their neutral smugglers, and hinted that it was a good cause for the declaration of war, and a cause of war which would justify them before the world; for hostilities were just then very earnestly sought for by one class of English statesmen. But, as the old hulks offered no serious obstruction, and were even of some positive advantage as marks to steer by, and the Secretary of State having assured Great Britain that two good channels were still left open, we escaped a declaration of war for our audacity in sinking some vessels where we chose along our own coast.

Though one portion of the design of the Government was accomplished by the capture of the forts at Hatteras, it was but one of a series of measures. There was no harbor at the forts

or in the adjacent waters of the sound which was suitable for a naval station, as the perils which were encountered there by the fleet of the Burnside expedition abundantly proved. But the gates of those large interior waters were burst open by the capture and holding of the forts, thus rendering it possible to enter, as was soon after done, and destroy the formidable interior works at Roanoke and along the rivers, and to capture both the rebel gunboats in those waters and the smaller piratical craft, which, darting out through the narrow inlets, had preyed to some extent upon Northern commerce.

But far more than this was required in order to give the Government a substantial control of the coast and its harbors. In particular, a naval station was needed, a harbor where our fleets could not only find refuge and safe anchorage, but where machine-shops and docks could be constructed for the refitting of our ships. The question where this spot should be was earnestly discussed. Several considerations, independent of each other, show the importance of some naval station south of Hatteras. It was needed to facilitate the furnishing of supplies for the blockading squadron. This work of supplying the fleet of blockaders was one of great magnitude and of vital importance. This fleet occupied the whole line of coast from the Rio Grande to the capes of Virginia, more than three thousand miles in length. The amount and variety of stores required by this fleet are almost beyond computation. There was, of course, a constant waste, and it was necessary that this should be as constantly supplied. These supplies embraced powder, shot, shell, materials for slight or temporary repairs, provisions, medicine, clothing, and coal for all the steamers. In addition to the ordinary provisions for a ship on a voyage, it was the purpose of the Department to furnish the vessels with fresh meats and ice, while even water at first had to be taken from Northern ports, as no Southern harbor was open, and in the beginning of the contest there were no suitable condensers provided.

It is easily seen, therefore, that it was a very serious question how this work could be performed with certainty or safety, when along that whole stretch of coast there was not a single port open to our ships, no place of refuge from a storm, or where a vessel could be repaired. Water, ice, and fresh pro-

visions on ice, formed of themselves a very formidable item in this transportation account; and when it is considered that it was necessary to keep a line of supply-ships going out and returning unbroken, from the borders of Mexico to the Northern ports, the difficulty of this part of the service of the Navy may be in part appreciated.

Another important reason why it was necessary for the Government to repossess itself of some Southern port was, that it might be used for repairing our ships. Enormous expense and great waste of time were occasioned by sending a vessel to the distant Northern ports; and yet it was often necessary to do this, where the work required could be performed in a few hours at the proper shop.

It was the first experiment which had ever been made of keeping a fleet of steamers constantly at sea, and even during the winter months, as a blockading squadron. The engines of these vessels being put to an unusual service, and often severely taxed in the excitement of the chase, were liable to accidents which would not have occurred in ordinary work, while the unavoidable wear of the machinery was also very great. The merchant-vessels, though the best of their kind, and performing excellent blockading service, were built of much lighter frames than the war-ships built in the Government yards, and the bills of repairs upon them were very heavy. These expenses would, of course, be greatly diminished if some spot central to the blockading line could be obtained, where machine-shops could be established, and where at least a portion of this work might be done.

Again, such a harbor and station were needed as a base of operations against other points. It would have been impossible to have carried on the operations against Fort Sumter and Charleston with no base nearer than New York or Philadelphia; and although it will probably be said that these were of little consequence as against Charleston itself, yet it must be remembered that every object was gained there which could have been reached by the capture of the city, except the glory of having taken the stronghold of the rebels. Subsequent events have shown that it could have been captured by a determined attack, such as was made at New Orleans, Mobile, and

Fort Fisher, but the Government wisely determined, after the first assault, that its possession would not repay the price of blood it would cost; and Admiral Dahlgren, with his Monitor guards within the bar, sealed the port of Charleston as effectually as if his fleet had been anchored between Sumter and the wharves.

This service could not have been performed, certainly not without a much larger fleet, had not Port Royal been in our possession, where our ships could be sent for all but the most important repairs. For a long time the iron-clads were daily under fire from the most formidable artillery which the rebels and England could produce; and, as a necessary consequence, one or more of them was almost daily in need of some repairs, which could only be done at the machine-shop, for the damages were not such as required a carpenter, but the blacksmith and the machinist. It was not a plank, but an iron plate, which was started; not a shot-hole to be plugged, but steam-joints to be made tight, and rivets to be fastened, and boilers to be made secure.

In this state of things, the Government was exceedingly anxious to obtain, at the earliest possible moment, possession of some one of the Southern ports where a naval station could be established. The Board, whose labors have already been mentioned, took the whole subject into consideration, and, after the Hatteras forts were occupied, submitted elaborate reports, embracing minute descriptions of every important position on the Southern coast. At the time when so many were busy in forming and circulating complaints against the Navy Department, it was not known that it was acting under the advice of the men who, beyond all others, were qualified to give an opinion—the only men, perhaps, in the country whose counsel at that moment the Government would have been justified in receiving. Fernandina, Brunswick, Port Royal, and Bull's Bay were all duly considered; and when, after anxious deliberation, a decision was reached, such was the state of the country, that it was necessary to keep it a profound secret. The choice lay between Bull's Bay, Port Royal, Brunswick, and Fernandina, as Savannah, Mobile, Charleston, and Wilmington were so closed and fortified that it seemed impossible that they could

be taken by assault, and no prolonged operations could be carried on against them without some secure base upon the Southern coast. It was strongly urged upon the Department that Fernandina offered advantages beyond all others, both because its harbor is commodious and easy of access, and because, by means of the railroad across the isthmus from Fernandina to Cedar Keys, communication could be kept open with the Gulf of Mexico. The claims of Brunswick were also earnestly pressed; and in addition to the arguments of the Board to which the subject was committed, it was whispered that prominent politicians, having received lands at certain points, were busy in endeavoring to convince the Government of the surpassing advantages of the places where their possessions lay.

It would seem, from a letter of Admiral Du Pont, that Port Royal was not the point to which it was intended to send the expedition until about the time of its sailing. What place was originally selected as the point of attack does not appear, but, from the tenor of the communications made to the Secretary, there is reason to suppose that it was Fernandina. According to Admiral Du Pont, the change was made at the suggestion of the Assistant Secretary, Captain Fox, with the concurrent advice of General Sherman, who had the command of the land forces. The expedition had grown to such large proportions that it was thought that the object first selected, whatever that was, would appear small in the eyes of the country, while it was believed that the capture of the forts at Hilton Head, and the occupation of Port Royal Harbor, would be of sufficient importance to justify the preparations which had been made.

The harbor of Port Royal is one of the best on the Southern coast, affording safe anchorage for all the vessels which are likely to enter there. It has a wide bar; but the fact that such a frigate as the *Wabash* was taken safely over it, is proof of the value of the harbor. It is situated between Charleston and Savannah, and may be said to be adjacent to both, as it is but a few hours' sail from either. It affords, therefore, a very convenient point from which to carry on operations against any part of the Southern coast, and is also a spot from which supplies could be furnished to the blockading fleet. In addition

to this, the harbor and the connected inland waters command nearly the whole of the Sea Islands, on which is raised the peculiar cotton called by that name, and which is so valuable in every market of the world.

As has already been stated, such was the state of the country that it was necessary to keep the nature and purpose of the expedition a profound secret. Until it was in a condition in which it could not be baffled either by treachery or indiscretion, it was not confided even to the President. Not that any one doubted him; but the experience bought so dearly in the defeat of the Fort Sumter expedition showed that, in the multitude of his perplexities, he might innocently be involved in the designs of others, and the Secretary was not willing to run the hazard of having his best ships taken from him without his consent or even knowledge at the moment of their sailing. The Government at that early stage of the struggle knew not whom it could trust. Endangered by a thousand acts of undisputed treachery, and perplexed by failures that could not reasonably be ascribed either to accident or incompetency, it was quite natural that loyal and true men should sometimes come under unjust suspicion.

Men looked back with amazement, after the war was over, at the state of public sentiment when it began. Few, indeed, understood the real nature of the conflict, and consequently the only possible method of success was continually overlooked. It was regarded by many as a mere political contest, and politicians were ready with all the usual nostrums for healing political disorders, and the doctors were almost unanimous in thinking that compromise could be relied upon as a specific in the case. But the disease, happily for the country, was beyond the reach of the quackery of compromise. Then it was believed that, at the worst, it was only a question of military strength, which could be settled in a brief period, with no permanent disturbance. Men would not believe at that time that it involved the profoundest principles of morals and religion; that it was closely connected with the progress of Christian civilization here and elsewhere—a battle in which it was proposed to tread humanity down, and therefore one in which the Redeemer of humanity could by no means remain neutral.

It is not to be denied that, at the first, a very large majority of the people of this country were in sympathy with the South on the real question of the war. It was perfectly evident that, had the question been restricted to the single issue of the protection and perpetuity of slaveholding, that the South would have had a speedy and a complete triumph without the necessity of secession, or the shedding of a single drop of blood. It was merely because the South was given over of God to assail the Union in her madness, that the North was roused to resistance, and then to a war, miscalled aggressive, in defence of the integrity of the country. But the conscience of the people had become so seared by long toleration of, and complicity with, a great wrong, the virus of that slave system had so pervaded and corrupted the nation's mind and heart, that with thousands even love for the Union was either overborne or cooled into indifference by the fear that in some way the success of the North would endanger the cherished institutions of the South.

Hence the determination, persisted in so long, to preserve both slavery and the Union; hence the damaging dispatch of the Secretary of State, that whatever issue the war might have, the status of the slaves would remain unchanged—which announcement, to the full extent of its influence, weakened our cause in England, and strengthened our enemies in their opposition abroad, while at home it sapped the moral foundation of the Government, and encouraged every lover of slavery, every friend of the South, every hater of what was called radicalism, to become a traitor whenever he thought that slavery was endangered, or at the most, to give only a half-hearted support to the cause of the North. Thousands of so-called loyal men, *Union* men, were for the Union, with slavery preserved intact, and would by far have chosen to see the South triumphant rather than the North should win an antislavery victory.

Hence, both in the Army and Navy, the Government found its plans thwarted, and its most reasonable expectations blasted, by some lack of energy or activity, or some failure to execute an order at the critical moment, or some apparent blunder which could scarcely be attributed to the lack of intelligence, or the refusal or neglect to obey an order, under some cover

which might shield from punishment, though not from the suspicion of a disloyal heart. Never before has a government triumphed under such overwhelming disadvantages. It was crippled severely at first by the resignation of so many officers whose services were greatly needed, and still more endangered by the addition of strength which the rebels thus received; but both these were less embarrassing than the danger from the disaffected remaining still in nominal connection with the Government, and who were not only supposed to communicate continually with the enemy, but who might at any moment become false to a trust, when treachery might be fatal to an enterprise. It required nothing more than indifference, a mere lack of proper enthusiasm in the cause of the Government, to make disaster certain.

When, therefore, the important expedition which captured the Port Royal forts was being fitted out, the Secretary was determined to confine his secret within a very narrow circle, so that there should be no opportunity for such another "accident," as the President called it in his letter to Captain Fox, by which the Sumter expedition was deprived of the ship without which all knew the plan must fail. A single example will show how important interests were sometimes put in peril merely because an officer was not so decided and earnest in the cause of the Government as to induce him to disregard the dead letter of an old command, in order to obey a new one conveying the real spirit and intention of the Government, although not technically binding. As has been mentioned in a previous chapter, General Scott, early in March, 1861, sent an order out to Fort Pickens that the troops on board the Brooklyn should be landed and the fort made secure. The commander of the squadron refused to obey, alleging that he was bound by the orders of the Secretary of the Navy of the preceding administration (Toucey) not to land the troops.

There are some, probably, who believe that his wish not to land the troops gave vitality to the order which he obeyed, while that of General Scott was disregarded. He stated that the attempt to land troops might bring on a collision and inaugurate civil war. The rebels had taken forcible possession of the United States forts and navy-yard at Pen-

sacola, and trained their batteries on Fort Pickens, and war on their part had already been most insolently begun; yet here was an officer to whom was intrusted the honor and property of his country, refusing to obey an order from the head of the Army, not only because it did not come from the Secretary of the Navy, but because to oppose the rebels might so offend them that they would begin civil war, and he was not willing to take upon himself such a responsibility!

The consequence of this was, that Secretary Welles was compelled to send Lieutenant Worden across the country with a special order. Worden was arrested and kept for six months in a felon's prison, and an opportunity was given to break up the expedition for the relief of Sumter, under cover of relieving Pickens, which would have been made safe long before had Captain Adams's enthusiasm in his country's cause been strong enough to overcome a doubt about a trifling technicality. With such experiences, it was well for the Secretary to be guarded in his subsequent expeditions.

Newspaper correspondents and collectors of news items generally succeed in penetrating all secrets but those of the grave; and even these are not always secure. They soon discovered that something unusual was in hand, when the work of preparation was begun in New York. That an important expedition was contemplated the country soon knew; and though scores of correspondents and wise editors affected to understand the whole movement, and many confident opinions were expressed, as if by authority, and the attention of the public was directed, now here, now there, as the point of destination, still no one outside of the Secretary and his immediate advisers knew its real purpose. Whether the indications that Fernandina would be attacked were made in order the more effectually to conceal the real intention, or whether the change mentioned in Admiral Du Pont's letter to the Secretary, November 6, 1861, was a real departure from the original plan, does not appear. The necessity of secrecy, and the great difficulty of concealing the plan from spies and others, justified extreme caution. The commanders of the vessels did not know their destination. The vessels-of-war all sailed under sealed orders furnished by Admiral Du Pont, and the transports received similar orders from

General Sherman, who commanded the troops; while the coal-vessels which were sent forward in advance of the fleet were ordered to rendezvous off Savannah, in order still to veil the real point of attack.

On Tuesday, the 29th of October, 1861, the most formidable squadron which had ever been fitted out in American waters, was ready to leave Hampton Roads. It numbered, including the army transports, fifty vessels; while those with coal, twenty-five in number, had sailed the day previous; so that there were seventy-five vessels in all engaged in this expedition. The weather had been unpleasant for some time previous to the sailing of the fleet, but appearances were favorable at the time of its departure, and the hearts of the soldiers, sailors, and officers swelled with high expectations when they saw on all sides the preparations for getting under way. All knew from the number and character of the ships that a decisive blow was intended for some important point, and they rejoiced in the opportunity to win both victory and honor. When the signal was made for getting under way, the various sounds of the welcome work rang out, mingling and floating shoreward over the waters of the roadstead and around the grim walls of the fortress. The pipes of the boatswains sounded cheerily as the anchors went up, and the measured tramp of the men at the capstans seemed like the march of a little army. High plumes of smoke, looking almost like black battle-flags, rose and waved over the steamers. The rigging of the sail-ships was full of busy sailors, and "All ready!" and "Let fall!" echoed from vessel to vessel as the broad wings were spread, and one after another they glided off, hauled up to their course, and stood out for the open sea. Soon the waters were dashed into foam by the wheels and "brazen fins" of the huge steamers, and they too moved away; the great Wabash, stateliest among them all, bearing the flag of Du Pont, went off with "majestic motion," as if conscious of her power, and anticipating victory.

Fifty ships stretching seaward in one squadron, bearing the American flag, had not been seen before, and it was a sight to warm an American heart, if, alas! there could be any thing gratifying in war except as it sometimes avenges the right.

The fleet had scarcely left Hampton Roads before the fair

promise of good weather disappeared, and the sea grew gradually rougher, till off Hatteras it encountered one of the gales so common in the region of the cape. Many of the transports labored hard; some of the ships were driven into the breakers, and were in great peril; and two of them struck, but fortunately got off without serious injury.

On Friday, November 1st, the gale increased in fierceness till it became a hurricane. The fleet was scattered in every direction, and on Saturday morning one single vessel was all that could be seen from the deck of the Wabash. Some of the transports, and some even of the armed vessels, were by no means fitted to encounter a November cyclone on that stormy coast; and the discomforts, the sufferings of the soldiers and sailors on board those ships during the storm, is one among the thousand examples of heroic endurance and self-sacrifice for the country's cause of which those who remained at home will never form any adequate conception. The unwritten history of war, and that which can never be written, the scenes which lie back of the glare of battle and the splendor of victory—these, could they be known, would show, as no official reports and no statistics of disease and death can do, what was endured by those who saved our country. Let one fancy, if he can, the feelings of the poor mangled fellows in the cockpit, berth-deck, and sick-bay of the Cumberland, when their last attendant rushed on deck, and left them there helpless and hopeless, unable to move, and the water swelling up over them and strangling them as they lay; or of the old Chaplain Lenhart, loved of all on board, who was seen going to his room just before the ship went down, and whom the waters doubtless swallowed up while on his knees before God. While commanding officers on sea and land should receive all the praise and reward which has been offered—for without their skill and personal qualities our victories could not have been won—it would be well for the cause of humanity, it would give fresh power and lustre to free institutions, if the heroism of the common soldier and sailor, and the courage of the subordinate officers could be set in a clearer light, and if the sufferings of these could be more fully known.

The world might be less eager for war sometimes, if the blinding veil of glory could be drawn aside, and the fatigue of

the march, the exposure of the wet and chilly bivouac, the sickening wards of the hospital, the terrible scenes of the battle and after the battle, all forms of exposure by night and day, in storms at sea, the wreck, and foundering ship, if these could be more distinctly seen; and while all due honor would still be rendered to noble leadership, the people, the crews, the rank and file, who endured the suffering and performed the work, would also receive, as they do not now, the due reward of their heroism. Every effort to show what the people did and suffered in our war strengthens the popular cause.

The scene on board of one of the transports in this storm illustrates these remarks. The steamer Governor left Hampton Roads with the rest of the fleet on the 29th of October, having on board the Marine Battalion. She continued near the Wabash until the 1st of November, when she met the gale, which about mid-day became so violent from the southeast as to compel them to keep the steamer's head to the sea. As was soon perceived, she was in no condition to encounter an ocean storm, and that the lives of all on board were likely to be in great peril unless some stancher ship could be brought to their assistance. Not a sail, however, was in sight over all the sea, whose every wave seemed ready to overwhelm or dash in pieces their frail ship, which shuddered to each shock as if conscious that her end was near. Laboring heavily in the great seas that seemed to show ill-will in dashing against her, she bore it bravely till 4 p. m., when several heavy seas smote her in quick succession, with such force as to break the port hog-brace in two places, thus materially weakening the vessel. Before this could be properly supported, the opposite starboard brace also gave way, bringing a fresh danger. Soldiers and sailors now labored together with that energy which a question of life or death inspires, and with great exertions succeeded in so staying and bracing the shattered timbers as to ward off the immediate danger. Soon after, with a sudden lurch, the brace-chains of the smoke-stack parted, and it was pitched overboard. It broke, however, some three feet above the deck, and thus they were enabled still to keep up the fires. The discomfort, more than that, the positive suffering of even well men, on a steamer under such circumstances, in a November storm, crowded in

every part, huddled together, with no fire except under the boilers, no warm food or drink, drenched and shivering, no one dry and comfortable in his home can understand.

Soon after the smoke-pipe was carried away, the steam-pipe burst, and they were confronted by a new danger. The loss of the chimney prevented them from making more than fourteen pounds of steam; and as soon as the engine began to work, it ran down to four or five pounds, and this was all the power they had for keeping the vessel's head to the sea, and to work the pumps, which now were needed, as from her straining she was leaking badly. The engineer was then obliged to stop the engine frequently, in order to get up a head of steam. The steamer now began to leak more and more; still when the engine could be worked there was not much difficulty in keeping her clear. When it was nearly dark—and the prospect was that they might never see the light of another morning—all on board were gladdened by the sight of a steamer with a ship in tow. They sent up a rocket, and then another, and at length they saw and answered the signal. There were, however, but six rockets on board, and when these were all gone, they had no resource but to fire their muskets. This was kept up for a long time, but the wind was blowing a hurricane, and the sea was running so high, that the steamer could render the Governor no assistance, although visible nearly the whole night. At 3 o'clock Saturday morning there came another very serious disaster. The packing around the cylinder-head flew out, and thus the engine was for a time perfectly useless, and the steamer of course unmanageable. When the engine could once more be started, it worked very slowly, and there was scarcely power enough to keep her head to the sea; the rudder-chain was broken away, the water was constantly gaining upon them, and the laboring boat appeared as if she would be literally dashed in pieces by the waves. At every lurch it was feared that the hog-braces would be carried entirely away, and they knew that this would be their speedy destruction, for it would wrench away the side of the boat, collapse the boiler, and tear off the wheel-house. A large number of men held on to ropes, by which the effect of the lurch of the boat was counteracted, and one can imagine what hours of anxiety and toil were

thus spent watching every motion of the almost foundering ship, and straining upon the ropes that held the broken timbers, so as to ward off the stroke of the waves, or the roll and pitch of the boat. All this time the water was gaining rapidly, so that it required a hundred men to bail and pump, in addition to what the engine could do, to keep themselves afloat. Then the rudder-head was also broken, the engine was of very little use, and they were at the mercy of the winds and the sea (and this was in a dark and stormy November night), drenched, without rest, and almost without food. Toward morning the wind lulled somewhat, and the sky looked brighter. At daybreak, when nearly all hope was gone, all hearts were once more gladdened by the sight of two vessels on the starboard bow, one of which proved to be the United States steamer *Isaac P. Smith*. They had flying on the *Governor* a signal of distress, which the officers of the gunboat descried, and immediately went to her relief.

At 10 A. M. the *Isaac P. Smith* was in hailing distance, and encouraged them by the promise to receive them all on board. A boat was lowered from the *Smith*, and a hawser carried out and taken on board the *Governor*; but very soon, and before any relief could be afforded, the hawser, by some inattention, was let go. The water was gaining very rapidly, the engine could be moved with great difficulty, and was nearly useless, and death seemed nearer than ever to the brave but nearly exhausted men. The *Smith* was obliged to haul off, but soon returned, and with difficulty another hawser was got on board, and they were taken in tow; but it was evident that they could not float long, even when towed, and how they were to be safely transferred from their sinking boat to another, in that wild sea, did not appear. Another vessel, the propeller *Young Rover*, now appeared, and proffered all possible assistance, but such was the violence of the wind that nothing could at the time be done. The remainder of the story of the rescue of these men is given in the very words of the official report of Major Reynolds, who commanded the marines on board:

The hawser from the *Smith* again parted, and we were once more adrift. The *Young Rover* now stood for us again, and the captain said

he would stand by us to the last, for which encouragement he received a heart-felt cheer from the men. He also informed us a large frigate was ahead standing for us. He then stood for the frigate, made signals of distress, and returned. The frigate soon came into view, and hope once more cheered the hearts of all on board the transport. Between 2. and 3 o'clock the United States frigate Sabine (Captain Ringgold) was within hail, and the assurance given that all hands would be taken on board. After a little delay, the Sabine came to anchor. We followed her example, and a hawser was passed to us. It was now late in the day, and there were no signs of an abatement of the gale. It was evident that whatever was to be done for our safety must be done without delay. About 8 or 9 o'clock the Sabine had paid out enough chain to bring her stern close to our bow. Spars were rigged out over the stern of the frigate, and every arrangement made for whipping our men on board, and some thirty men were rescued by this means. Three or four hawsers and an iron stream cable were parted by the plunging of the vessels. The Governor, at this time, had three feet water, which was rapidly increasing. It was evidently intended by the commanding officer of the Sabine to get the Governor alongside, and let our men jump from the boat to the frigate. In our condition this appeared extremely hazardous. It seemed impossible for us to strike the frigate without instantly going to pieces. We were, however, brought alongside, and some forty men succeeded in getting on board the frigate; one was crushed to death between the frigate and the steamer in attempting to gain a foothold on the frigate.

Shortly after being brought alongside the frigate, the starboard quarter of the Sabine struck the port bow of the Governor and carried away about twenty feet of the hurricane deck from the stem to the wheel-house. The sea was running so high, and we being tossed so violently, it was deemed prudent to slack up the hawser and let the Governor fall astern of the frigate, with the faint hope of weathering the gale till morning. All our provisions and other stores, indeed every movable article, were thrown overboard, and the water-casks started to lighten the vessel. From half-past three until daybreak the Governor floated in comparative safety, notwithstanding the water was rapidly gaining on her. At daybreak preparations were made for sending boats to our relief, although the sea was running high; and it being exceedingly dangerous for a boat to approach the guards of the steamer, in consequence, the boats lay off, and the men were obliged to jump into the sea and were then hauled into the boats. All hands were thus providentially rescued from the wreck, with the exception, I am pained to say, of one

corporal and six privates, who were drowned or killed by the crush or contact of the vessels. Those drowned were lost through their disobedience of orders in leaving the ranks or abandoning their posts. After the troops were safely reëmbarked, every exertion was directed to securing the arms, accoutrements, ammunition, and other property which might have been saved after lightening the wreck. I am gratified in being able to say nearly all the arms were saved, and about half the accoutrements. The knapsacks, haversacks, and canteens were nearly all lost. About ten thousand rounds of cartridges were fortunately saved, and nine thousand lost. Since being on board of this ship every attention has been bestowed by Captain Ringgold and his officers toward recruiting the strength of our men, and restoring them to such a condition as will enable us to take the field at the earliest possible moment. Too much praise cannot be bestowed upon the officers and men under my command—all did nobly. The firmness with which they performed their duty is beyond all praise. For forty-eight hours they stood at ropes, and passed water to keep the ship afloat. Refreshments in both eating and drinking were passed to them at their posts by non-commissioned officers. It is impossible for troops to have conducted themselves better under such trying circumstances. The transport continued to float some hours after she was abandoned, carrying with her when she sunk, I am grieved to say, company books and staff returns. In order to complete the *personnel* of the battalion, I have requested Captain Ringgold to meet a requisition for seven privates, to which he has readily assented. I considered this requisition in order, as I have been informed by Captain Ringgold it is his intention, or orders were given for his ship, to repair to a Northern port, in which event he can be easily supplied, and my command by the accommodation rendered complete, in order to meet any demand you may make for our services.

Under God we owe our preservation to Captain Ringgold and the officers of the Sabine, to whom we tender our heart-felt thanks for their untiring labors while we were in danger, and their unceasing kindness since we have been on board the frigate.

This report is respectfully submitted.

I am, commodore, very respectfully, your obedient servant,

JOHN GEORGE REYNOLDS,

Commanding Battalion Marines, Southern Division.

Flag-Officer SAMUEL F. DU PONT,

Com'dg U. S. Naval Expedition, Southern Coast U. S. N. America.

The steamer Isaac P. Smith was obliged to throw her armament overboard in the gale, and the men and crew were res-

cued from the Peerless transport while she was in a sinking condition. Such was the gale which Du Pont's squadron encountered before reaching Hilton Head. It seemed an unpromising commencement of an enterprise which had such a triumphant termination. In this case, as in that of Burnside's expedition to Roanoke, the rebels were inclined to interpret the gale as indicative that God was on their side; and the result showed how often, through narrowness of view; or the influence of our own feelings controlling the judgment, we misconstrue the providences of God.

With far less damage than was reasonably expected from so fierce a tempest, twenty-five vessels of the fleet, in company with the Wabash, anchored off the bar at Port Royal Harbor, on Monday, November the 4th, at 8 o'clock in the morning, while many more vessels of the squadron were heaving in sight. Even then, though in comparative safety, the position of the fleet was by no means a pleasant one. The bar lies ten miles seaward, the coast has no feature prominent enough to guide the navigator, and the lights were extinguished, and the buoys and channel-marks had all been destroyed or misplaced.

But the skill and science of that accomplished officer, Admiral (then Commander) Charles H. Davis, aided by Mr. Boutele, the able assistant of the Coast Survey, enabled them to overcome all difficulties. Under the eye of these gentlemen, a search for the channel was at once commenced, which, from their intimate knowledge of the locality, was soon successful, and by 3 p. m. it had been sounded out and buoyed. The transports and gunboats were immediately ordered in, and before dark these had all crossed the bar, and were anchored in the roadstead of Port Royal, the gunboats having first chased Commodore Tatnall's rebel steamers under the shelter of their batteries. On Monday evening Commander Davis reported that there was water enough to allow the Wabash to enter the harbor. Admiral Du Pont felt the great responsibility of risking the noble frigate in the passage of a bar two miles wide, where, in places in the channel-way, there was no more than from one to two feet of water to spare, but, on the other hand, the expedition depended mainly upon this frigate's powerful battery. The admiral decided that, however great the risk, it

must be taken, and on Tuesday morning the Wabash was got under way, and stood slowly into the harbor. Every possible precaution was taken, for such was the rise and fall of the spring-tide that, had she grounded, the chances would have been in favor of her total loss. Slowly feeling their way along the channel with the lead, and with faculties all awake to every peril, the officers guided the great ship gently, as if leading a little child, but with such delicate skill that she did not touch; and when, followed by the Vanderbilt, the Susquehanna, and the Atlantic, she at length glided into deep water, and passed into the midst of the fleet already anchored, cheer after cheer burst from the excited thousands who almost breathlessly had watched her perilous passage. The Wabash was anchored, and immediately they commenced preparations for action throughout the whole fleet. But the necessary examinations of the harbor could not be completed in season for an attack that day, as buoys had to be planted in various places, and especially on a dangerous shoal called the Fishing Rip. A reconnoissance in force had been made in the morning, under the command of Commander John P. Rodgers and Brigadier-General Wright, with four gunboats—the Ottawa, Lieutenant Commanding Stevens; the Seneca, Lieutenant Commanding Ammen; the Curlew, Acting Commander Watmough; and the Isaac P. Smith, Lieutenant Commanding Nicholson. These proceeded far enough to draw the fire of the batteries on Hilton Head and Bay Point, and showed that the vast fortifications were works of strength, and scientifically constructed. This done, the gunboats withdrew, and all was made snug for the night out of gunshot from the forts. The next day the wind blew a gale from the southward and westward, and the attack was necessarily deferred. The forts which the fleet was thus ready to assault are situated at the entrance of Port Royal Harbor—the one, Fort Walker, on the south, on Hilton Head; and the other, Fort Beauregard, on the north, on Bay Point. These forts are nearly two and a half miles distant from each other, and consequently could not be engaged at the same time except at long range—too long for the most effective use of the batteries of the ships, while they might be reached with heavy rifled cannon from the batteries on shore.

These fortifications were by no means insignificant works, Fort Walker, on Hilton Head, mounting twenty-three guns, two of which were 6-inch rifles, and one a 10-inch Columbiad. Fort Beauregard and its outworks mounted twenty guns in all, some of them 6-inch rifles, one 10-inch and one 8-inch Columbiad. The ships could not pass between these forts without being in range of the rifles and heavy guns of both, and they had therefore every reason to expect a severe encounter, especially as one fort had the means of throwing hot shot. Less formidable fortifications than these had been successful in repelling fleets of heavy ships, and it showed no lack of courage if some doubts were entertained of the result. The experience of Stringham at the Hatteras forts was encouraging, but then those works were by no means as well constructed and formidable as these. It was a fleet of powerful steamers that was to attack, and calculations based upon the inefficiency of sailing vessels were no proper guide.

The plan of Fort Walker, on Hilton Head, was such that its principal guns were mounted on two water-faces, which were so nearly in line as to admit of an enfilading fire from a certain point, while the flanks were much weaker. It was determined to direct the weight of the attack first upon this, the strongest work, and then turn to Fort Beauregard. The plan was for the fleet to pass up midway between the forts and engage both at long range; and when the line reached a point about two and a half miles north of the forts, to turn to the south round by the west, and come to close action with Fort Walker, attacking on the weakest flank, while at the same time the shot would enfilade the two water-faces. The plan of the fight comprised a main squadron to attack in line, and a flanking squadron, to be thrown off in the northern part of the harbor, to engage the rebel fleet of gunboats, and prevent them from attacking the rear of the line, or cutting off any disabled ship.

The main squadron consisted of the Wabash and the *Susquehanna* frigates, the sloop *Mohican*, the sloop *Seminole*, the sloop *Pawnee*, the gunboat *Unadilla*, the gunboat *Ottawa*, the gunboat *Pembina*, and the sailing sloop *Vandalia* towed by the *Isaac P. Smith*.

The flanking squadron was composed of the gunboats Bien-ville, the Seneca, the Curlew, the Penguin, and the Augusta. To these should be added the Pocahontas, which, owing to the effects of the gale, did not reach the scene of action until about mid-day.

The captains of all the ships had been summoned on board the flag-ship, and were minutely instructed in regard to the plan of attack, and the place which each ship was to occupy in the line, and how to meet such contingencies as might probably arise in the progress of the fight. Early in the morning of the 7th of November every ship was prepared for action with the most scrupulous care, for all felt that important consequences must follow the battle, and they knew that they were to encounter very formidable works, and they had good reason to believe that they mounted some heavy rifled guns. Every spar, not absolutely needed in its place, was sent down; every sail was taken in, as was also every superfluous piece of rigging; every thing loose was made fast, and every thing was snugly stowed. Nothing remained on deck which could impede the freest action; the ports were all open, the guns all loaded and cast loose; the magazines were opened; hammocks and splinter-nettings were in their places; the carpenters all ready with tools and shot-plugs prepared. Each gun's crew at their stations; buckets of water were placed about the decks to extinguish a fire or quench the thirst of the men; the gratings were on the hatches, and the tarpaulins were battened down; the grim arrangements of the cockpit were made; the sand to receive the expected blood spread on the decks; hammocks were slung over the hatches to lower the wounded, and the signal-officers were watching the flag-ship. The vessels were literally stripped for a fight, and the engines seemed panting with eagerness to start. When all was ready, for a few minutes the ships were silent. The men looked, without speaking, in each other's faces, and seemed to be thinking what an hour might bring.

At 8 o'clock the ships were all riding to the flood, their bows pointing seaward, the forts just visible in the distance, the ships and the forts all silent alike. The signal was made to get under way, and at 8h. 10m. the flag-ship tripped her

anchor, and slowly, as if with conscious dignity, the huge frigate turned and headed in for the forts, and the whole fleet followed in order the movements of the leader, the *Susquehanna* pressing close to the *Wabash*. The signal for close order was made at 9, and for nearly half an hour longer the ships moved silently on. At 9h. 26m. a jet of smoke shot out from Fort Walker, and then a shell struck the water far short of its mark, and then the dull roar of the gun came rolling along the line. Fort Beauregard was also ready, and a flash, and the leap of the curling smoke, and the splash of the shot, and then the report brought the rebel challenge and defiance to the fleet. It was speedily answered. The huge pivot-guns of the *Wabash* and *Susquehanna* were trained on the forts, and each received from the ships an answering shot.

It was probably one of the best exhibitions of scientific battle made during the war—one for which the commanding officer received due credit at home and abroad. The fleet passed into the harbor midway between the forts, receiving the fire from both, and returning it at long range. When about two and a half miles above the forts the flag-ship turned to the southward, and at 10h. 15m. the signal for close action was made, and the *Wabash* passed Fort Walker at a distance when abreast of eight hundred yards, the other vessels of the line following. This gave each vessel an opportunity of attacking the weak flank as they approached the forts from the north, and of enfilading, or nearly so, the two water-faces, which fire was of course a destructive one, while, as they passed the forts abreast, they could sweep the men from their guns by the storm of their full broadsides. Nor was this all. They passed the forts when moving southward at a distance of eight hundred yards. Of course the rebel guns were sighted as near as possible for that distance; but when the ships made the second circuit, they passed much nearer, sighting their own guns for five hundred and fifty yards; and so the gunners of the fort had not only to fire at a moving object, but the ships were some three hundred yards nearer than when they passed at first. Of course their aim was rendered doubly uncertain, and this probably accounts, as it did at Hatteras, for the vessels receiving much less damage than was anticipated. To add to the confusion of the rebels,

some of the gunboats took up a position where, on the flank, they could enfilade the main works, and kept up there a very accurate and destructive fire. The management of the battle on the part of the commanding officer could scarcely have been better. The forts were at once overmatched by skill and science. Each vessel, as it came down from the north, sent some enfilading shot into the fort from its pivot-guns, and then poured in the whole starboard broadside; and when this was repeated in quick succession by the whole fleet, it will be seen that there was scarcely an intermission to the terrible hail of shot and shell sweeping the parapet and traverses, plunging through the embrasures, and bursting over and within the area of the works. Having come down from the north and delivered their fire, each ship went round, and, approaching the fort from the south, and on a different line, again opened with the port broadside, though the main dependence was not on the port battery; then again, as soon as the ship could be brought round, the starboard broadside was ready. The fire of the fort could not be kept up under such a terrible fire, and it began to slacken almost from the beginning of the action. After the third round of the ships, and the starboard broadsides had been delivered three times, the fort was abandoned, the garrison running literally to the woods for shelter, the battle was over, and at twenty minutes after two, Commander John Rodgers hoisted the flag of the Union over the deserted works. At sunset it was discovered that Fort Beauregard had also been abandoned. The next morning our flag was also floating over that work, and a lodgment was gained upon the Southern coast of the utmost importance to the Union cause—one where the authority of the Government was never disputed again. The victory gained us undisputed possession of one of the finest harbors on the Southern coast, and a sufficient base and depot for all the operations which have been mentioned in a former part of this chapter. It afforded the means, as was afterward shown, of sealing up the harbor of Charleston as effectually as if the city was in our hands; and the capture of Port Royal included in its direct consequences all that was essential in the occupation of that rebel stronghold. It was rendered perfectly useless to the rebel cause.

It gave the world another successful example of the manner in which steamships with an American battery can deal with forts, and changed materially on this point what were thought settled opinions in regard to naval war. The Wabash carried on her spar-deck as heavy guns as at the beginning of the war had been mounted on a French or English ship, while the battery of her gun-deck was composed of 9-inch guns, and her pivot-guns were heavier still. The broadsides from such ships are literally crushing ones. Delivered in quick succession by steamers passing a fort, and then returning on a different track to fire the other broadside, and at distances varying from eight hundred yards to half that distance, nothing can withstand them. For although an earthwork may not thus be battered down, the defenders of it cannot stand to their guns; and a fleet of staunch steamers with such batteries can pass a fort without a greater risk than may reasonably be taken, as was afterward clearly shown.

The successful experiments made at Hatteras and Port Royal showed clearly that even wooden steamers could encounter formidable works on land with comparative safety; and the experience of these victories, and their moral effect, prepared the way for the more important operations against forts at a later period of the war. It is, at least, doubtful whether a fleet would have been risked at New Orleans, had not the forts at Port Royal first been taken. This novel expedition placed also in the hands of the Government those famous Sea Island cotton-lands which had so enriched their owners by the unrequited labor of the slave. In that region lived the men who, for years, had cherished and strengthened, as they could, the spirit of rebellion, fattened on the riches of their lands, and the hopeless toils of their bondmen; and from that portion of South Carolina came the corrupting spell that blinded and maddened the South, and prepared her for rebellion and ruin.

CHAPTER XXVII.

CAPTURE OF FORT CLINCH, FERNANDINA, AND ST. MARY'S.

AFTER the capture of Port Royal, it was determined to capture some points farther south, among the most important of which is Fernandina, on the coast of Florida, at the head of the peninsula, and connected with the Gulf by the Cedar Keys Railroad. The preparations for the defence of Fernandina had been very carefully made; the works were well constructed, and were considered by the rebel officers quite sufficient for the protection of the city. The batteries, to use the language of Commodore Du Pont, were as complete as art could make them. Six were well concealed, protected in front by ranges of sand-hills, and contained perfect shelters for the men. They covered so small an extent of ground, and were so concealed by the natural growth and the formation of the land, that it would have been almost impossible to strike them from the water. Another battery of six guns, though larger, and on that account offering a better mark, was equally well sheltered and marked.

These batteries and the heavy guns mounted on Fort Clinch commanded every part of the main ship-channel, and could rake an approaching vessel. Besides these, there was another battery of four guns on the south end of Cumberland Island, the fire of which crossed the channel inside the bar. Moreover, the water was so shoal upon the bar, and the channel so crooked, that a vessel would necessarily remain a long time under fire, and at great disadvantage; and even when a fleet had passed all these defences successfully, there still remained a well-constructed and naturally masked battery at the town which commanded the inner anchorage. The precipitate abandonment of all these

formidable works, including Fort Clinch, when there were troops sufficient to man them, shows the fear which had been inspired by the capture of the forts at Hatteras Inlet and Roanoke Island, and more especially of those at Port Royal.

The old theory of the superiority of forts as against ships had been thoroughly exploded by the use of shell-guns, and as yet they had no settled opinions as to what limit might be set to the power of this new method of attack by steamers with such an armament. They only knew that thus far they had conquered in every battle, with no serious injury to the ships; and the garrisons of these works seemed to have thought that inasmuch as they would be beaten in the fight, it would be better to save life by leaving their defences than to make a vain attempt to save them.

The expedition intended to operate against Fort Clinch and the connected works around Fernandina, left Port Royal on the last day of February, and on the 2d of March entered Cumberland Sound by St. Andrew's Inlet. The fleet comprised the following vessels: Ottawa, Mohican, Ellen, Seminole, Pawnee, Pocahontas, Flag, Florida, Bienville, James Adger, Alabama, Keystone State, Seneca, Huron, Pembina, Penguin, Isaac Smith, Potomska, armed cutter Henrietta, and the transports McClellan, Empire City, Marion, Star of the South, Belvidere, Boston, and George Creek, with a brigade of troops and battalion of marines. This squadron entered Cumberland Sound instead of approaching by the ocean, in order to turn the heavy works on the south end of Cumberland and the north end of Amelia Islands, works to which reference has already been made.

Soon after entering the sound, information was received through a colored man that the rebels were abandoning all the fortifications around Fernandina, and were retreating from Amelia Island. Commodore Du Pont at once sent forward the light-draught gunboats and transports, with orders to push through the sound as rapidly as possible, and prevent the destruction of private and public property, or any other outrages which might be committed. These vessels were placed under the command of Commander P. Drayton; and Commodore Du Pont, with some of the heavier ships, left the sound and went to Fernandina by

sea. The detachment of the squadron which went down the sound found the navigation intricate and difficult, and upon reaching the flats where the tides from the north and south meet, it was found that only three vessels, the Pawnee, the Ottawa, and Huron, were able to cross. With these, Commander Drayton pushed on, and when only three miles from Fort Clinch, two out of these three grounded as the tide was falling, and the squadron was thus reduced to one vessel, the Ottawa, and three launches from the Wabash. These incidents show that the expedition would have had a different issue if the rebel soldiers had remained to defend their works. On approaching Fort Clinch it was evident that it was deserted, and a boat was sent on shore to raise over it the American flag; and in this bloodless manner the first *national* fort was recovered from the rebels. When they reached Fernandina, a small steamer was seen endeavoring to escape up a creek, but she was pursued by the launches, captured and brought back. She was filled principally with women and children, who were hurrying away as if escaping from savages. She had also on board some military stores. The rebel leaders, as it would seem, had purposely alarmed and exasperated the people by the most extravagant and false reports of what might be expected from the Yankees; and when the troops left, evidently in a panic, the inhabitants fled also in perfect dismay.

The capture of St. Mary's and of St. Augustine followed almost immediately the occupation of Fernandina, and thus before the close of the year 1862 great progress had been made in reoccupying the Southern coast—a work by far the most important part of which was necessarily performed by the Navy. The historian of the Navy, however, has not the slightest temptation to underrate, in any particular, the gallant exploits of the Army. It had a work of its own which it nobly performed, and won its own proper glory. In all the operations on the Southern coast there appears to have been the most cordial good feeling and harmonious coöperation between the two arms of the service; yet necessarily a large part of the severe and dangerous labor was performed by the Navy. The ships and boats were the pioneers in every enterprise; the great guns cleared the path for the Army, and covered the landing, the

advance, and the retreat. It transported or protected their stores, received on board the sick and wounded, and silenced forts and batteries, so that the troops could approach with comparative safety. The explorations of the country were necessarily made by the Navy, with its boats or light-draught steamers, along the shallow waters of the bays, the rivers, and muddy creeks—a service always laborious, always dangerous, and often attended with a loss of life in fearful proportion to the numbers engaged.

Wilmington, Charleston, and Savannah, on the Atlantic coast, and Mobile, on the Gulf, still remained in the hands of the rebels; but although these were the chief cities, yet, as these were closely blockaded, Wilmington alone excepted, the operations along the sounds and rivers by which the trade on these inner waters was broken up, was really a greater injury to the rebel cause than the capture of all the large cities would have been without the occupation of the inner waters of North Carolina, Georgia, and the upper portion of the Florida peninsula.

So soon as this work was accomplished, and it was seen that these points could not be again wrested from the possession of the United States, it was evident that the fall of these cities was certain to follow in due time, and the possession of Charleston and Mobile was of far more importance, from the moral influence of a victory, than from their military value.

When the coast had thus been occupied, and a lodgment had also been made for the Army in Tennessee by the capture of Forts Henry and Donelson, the defeat of the rebellion became only a question of time. It had already lost its expansive power; and although it might still be capable of making strong efforts in particular directions, it had passed the climax of its strength and successes.

As in the North Carolina sounds, after the capture of the Hatteras forts and Roanoke Island, there were still many points where the rebels had established batteries, and from which they fitted out expeditions both by land and water, so on the coast of South Carolina, Georgia, and Florida. After Port Royal, Brunswick, and Fernandina had been occupied, there were along the rivers and creeks, inlets and sounds, which

are almost innumerable, fortified positions in all directions—on the small islands and headlands—designed to protect the channels which form the highways of that low and marshy region. The Department believed it to be of the utmost importance to search out all such places, destroy any works which might be found, capture or destroy shipping and boats used in traffic, and scatter any bodies of troops that might collect within reach of the guns of our ships.

This perplexing task, so laborious and dangerous for the seamen and inferior officers, was well performed by Commodore Du Pont and his associates in arms.

These expeditions and small battles, taken singly, seem of little importance, and yet it was a process in which daily progress was made in weakening the rebellion, and in recovering the territory of the United States from the foe, and in which daily deeds of heroism and daring were performed, and lives were sacrificed, and mourning was brought to many distant homes. They formed one important, though not prominent, feature of the war, and are worthy of a place in history, not only as a record of acts of peril and bravery, but as showing how extensive and complete the plan of the rebels for defending the coast was, and how great the labor of destroying the whole network of forts, batteries, and obstructions, until at length all the interior channels of navigation, extending from Norfolk to Florida, with few interruptions, were brought under the control of the Government.

One of these lesser expeditions was made in November, 1861, up St. Helena Sound, under the command of Commander Drayton. On the 25th of that month the Pawnee, the Unadilla, the Pembina, and the Vixen left Port Royal, and proceeded up the sound to ascertain what works of defence might be found on the connecting waters. Off the entrance of South Edisto River a small steamer was discovered, but her speed and light draught enabled her to escape up the river. Soon after coming in sight of the point of Otter Island, a formidable looking earthwork was discovered. The Pawnee and the gunboats halted, and threw some shells into the battery, but there being no response, they ceased firing, and sent a boat on shore to reconnoitre. They found a well-constructed but deserted

work, triangular in form, with two faces on the water, of two hundred and fifty feet in length each, with bastions and a curtain on the land side, and the whole surrounded by a ditch. The magazine had been blown up, and the whole was dismantled. The fragments of an 80-pounder rifled gun were lying there, and large quantities of timber and palmetto-logs had been collected.

This fort was in a very commanding position. All vessels on the inland route to Charleston passed necessarily under its guns, and four miles above the fort the South Edisto and Ashepoo Rivers approach each other so closely that a few guns on the narrow neck of land could easily control each stream, while under the guns of the work on Otter Island is the best anchorage that can be found in the vicinity. It is not easy to see why such a position should have been abandoned, except through fear of the fleet which had been inspired by the capture of Port Royal and the forts of the Carolina sounds.

After the examination of this work, the little fleet continued up the Coosaw, piloted by Captain Boutelle of the Vixen. Ten miles from Otter Island, at the junction of Barnwell Creek with the Coosaw, another fort was discovered, directly ahead. The engines were slowed at the distance of a mile, and the usual complement of a few shells was paid to the supposed garrison. There was no reply, and no signs of occupation, and a boat was sent on shore to take possession. It was a redoubt, with a ditch on three sides, the top of the parapet being about thirty feet above the water. The armament had consisted of three guns, one rifled one that had been removed, and two old 18-pounders. From these old pieces the sailors knocked off the trunnions, gathered up a quantity of intrenching-tools, and some siege-gun carriages, and then the vessels returned to Otter Island, and there anchored for the night. The next day they ascended the Ashepoo River, and after running four miles another redoubt was discovered, also abandoned. Like the others, it was very carefully and skilfully constructed with a deep ditch around it. The armament had been removed, except an 18-pounder smooth-bore and a 20-pounder rifle, and these had been burst. At Hunting Island they found that the light-house had been blown up, and every thing valuable had

been carried away. The whole country seemed quite deserted by white men, and wherever it was practicable the negroes had been removed. On the south side of the river many still remained, and all of them showed the most friendly spirit, and were rejoiced at the coming of the Yankees, for whom they had long been looking, they said, and to whom they turned with confidence that their freedom would now be obtained. It is a subject worthy of consideration that the first serious and effectual blow given to slavery was by the Navy, in the very focus and proudest centre of the slaveholding aristocracy at Beaufort, and in the vicinity, and that the cannon of the Union fleet at Hilton Head must have shaken the grave of Calhoun. No liberated slaves have been more secure in their freedom than those of the Sea Islands, and although the most ignorant and degraded of all the four millions, in less than two years after the close of the war they had made such progress under Northern teachers as to cause the islands to produce more cotton to the acre than ever before. Another account of a similar expedition is here added in the words of Commander Rodgers himself:

U. S. FLAG-SHIP WABASH, PORT ROYAL HARBOR, December 6, 1861.

SIR: On yesterday morning I left Tybee Roads before daylight, with the steamers Ottawa, Seneca, and Pembina, and crossed the bar of Wassaw Sound at half tide, not having less than eighteen feet of water upon it.

We approached the fort on Wassaw Island within a mile, and seeing neither guns nor men, we did not fire, but I sent Lieutenant Barnes to it with a white flag. He found it an enclosed octagonal work, with platforms for eight guns on the water-faces. The land-faces were protected by abatis. The work was well constructed. The guns had been removed, the platforms cut, and the magazine blown up. From the freshness of the footprints, and other signs, it appeared to have been abandoned very recently. Adjoining the fort are huts or sheds for a large garrison. Some lumber and bricks remain; every thing else had been carried away.

We immediately pushed on to Cabbage Island, where we had been led to look for another battery, but there was nothing of the kind there. We went to the mouth of the creek, through the Romilly Marsh, and to the mouth of Wilmington River.

From the mouth of Wilmington River we observed a battery bear-

ing from us about N. W. by W. half W., and distant about three miles. It is on the river, and just above a house with a red cupola, which is one of the Coast Survey's points of triangulation, and is about ten miles from Savannah. Between the house and the fort was a large encampment, but we could not count the tents. We counted five guns, apparently of large calibre, on the face of the battery toward us. We could only see one gun upon the other face, but there may have been more. We were near enough to see the men on the ramparts and the glittering of their bayonets. We saw several small vessels; some of them in Romilly Marsh were in tow of a small steam-tug, but they were all beyond our reach.

Upon Little Tybee Island we could see no earthworks, but could not get nearer to it than two miles, because of the shoals. In coming out of Wassaw Sound at high tide we had not less than twenty-one feet of water on the bar.

Returning to Tybee Roads at 1 o'clock, I landed and made a reconnoissance on foot with the marines of the Savannah, and detachments of small-arm men from that ship and the Ottawa. Upon reaching the mouth of the Lazaretto Creek, having no boats in which to cross, our progress was stopped. We waited until low tide, but the creek was unfordable. I was able, however, with the assistance of Lieutenant Luce, to obtain, from the top of a tree, the position in which a battery has been supposed to exist, and am satisfied that there is no battery there. The spar, which was mistaken for a derrick, is simply a place of look-out, and there was no appearance of any earthwork or position for guns. A battery at such a place would be of no use whatever. There may, however, have been a signal-gun placed there, as the dune upon which the spar is raised is upon the southeastern part of Little Tybee Island, and is a commanding point of observation.

I have to thank Lieutenant Commanding Stevens for the most earnest, cordial, and efficient coöperation; and also Lieutenants Commanding Ammen and Bankhead, whose vessels were always in the right place, and always well handled.

I have the honor to be, very respectfully, your obedient servant,

G. R. P. RODGERS, *Commander.*

Flag-Officer S. F. Du Pont, commanding, etc.

Another and interesting expedition was made to St. Helena Sound, and one to the North Edisto, by Commander Drayton, and by him is thus described:

U. S. STEAMER PAWNEE, PORT ROYAL HARBOR, S. C., December 9, 1861.

SIR: In obedience to your order of the 4th instant, I proceeded to sea at daylight of the 5th, accompanied by the gunboat Unadilla, Lieutenant Commanding N. Collins; steamer Isaac Smith, Lieutenant Commanding J. W. A. Nicholson; and Coast Survey steamer Vixen, Captain Boutelle, and reached the anchorage off the fort on Otter Island, St. Helena Sound, at mid-day. In the course of the afternoon, some negroes coming on board, and reporting that there was a body of soldiers at the entrance of Mosquito Creek, a place up the Ashepoo where the inland route to Charleston commences, I proceeded as far as that place, when the night coming on, obliged me to return.

I saw, however, no signs of the presence of white people, excepting that some buildings, which I discovered the next day to have been in Hutchinson's Island, were burning. On the morning of the 6th, the United States sloop Dale, Lieutenant Commanding W. F. Truxton, appearing off the harbor, I sent the Isaac Smith to tow her in, a pilot being furnished by Captain Boutelle.

Unfortunately, however, when half-way up, the Dale stuck fast, and as it was then about high water, no exertion could get her afloat until 11 o'clock of that night, when she was forced into deep water, without having suffered any apparent injury, and towed the following morning, by Captain Boutelle, in the Vixen, around Morgan Island, this having become necessary, owing to her having forced over the shoal which divides that channel from the one she was in originally. So soon as she was safely at her anchorage near us, I proceeded up the Ashepoo with the Unadilla, Isaac Smith, and Vixen, to examine that river farther up than I had been able to do on the previous occasion. On approaching Mosquito Creek, we saw a picket of soldiers, who took to their horses, however, on our approach, and escaped into the woods, hastened, perhaps, in their flight by a shot or two which were thrown after them.

Continuing up the river, I landed on Hutchinson's Island, and found that two days before all the negro houses, overseer's house, and out-buildings, together with the picked cotton, had been burned.

The attempt had at the same time been made to drive off the negroes, but many had escaped, although some of their number, they said, had been shot in attempting to do so. The scene was one of complete desolation; the smoking ruins, and the cowering figures which surrounded them, of those negroes, who still instinctively clung to their hearthstones, although there was no longer shelter there for them, presented a most melancholy sight, the impression of which was made

even stronger by the piteous wailing of the poor creatures, a large portion of whom consisted of the old and decrepit. We were not able to leave until some time after dark, and singular enough, the moment we were fairly under way, a bright signal-light was burned on the very plantation we had just quitted, showing that some of the blacks, for there was certainly no white man there, were communicating the fact of our departure. On the following morning, with the same vessels, I started to explore the Coosaw River, but very soon after leaving, the Unadilla, unfortunately, was completely disabled by the breaking of a main crosshead, and I was obliged to leave her at anchor, and continue on with the other two vessels. When off Fort Heyward, I left the Isaac Smith, it not being quite safe to take so long a vessel higher up, and continued in the Vixen as far as the entrance of the Beaufort Creek to a place called the Brick Yards, where I had been told there was either a fort or a guard of soldiers. Nothing, however, being seen of either, I anchored off a plantation belonging to Mr. Bythewood close by, for the purpose of getting information, as I saw a great many negroes there.

On landing, I found that a short time previously the cotton-house with its contents had been burned, and all of the negroes that could be caught had been taken away. Here were large numbers of those, however, who had left Hutchinson's Island after their houses had been burned, and who, with their household effects piled up about them, lined the beach; some of them begging to be permitted to go to Otter Island, saying that they had neither shelter nor food, were taken back with us.

Late in the afternoon I returned down the river, reaching our anchoring off Fort Otter at sunset, the Unadilla having been towed to the same place by the Isaac Smith. As I did not see that the services of the Pawnee were any longer necessary in St. Helena Sound, and thinking it important to get the Unadilla as soon as possible to a place where her engines could be repaired, I determined this morning to tow that vessel to Port Royal Harbor, which I have done, reaching here, in company with the Vixen, at half-past seven this evening.

In obedience to your instructions, before leaving, I transferred the charge of the fort and adjacent waters to Lieutenant Commanding Nicholson, who, with the Isaac Smith and Dale, will remain there until he receives further orders from yourself.

As about one hundred and forty negroes, most of them in a very destitute condition, had collected at Otter Island before my departure, I directed Lieutenant Commanding Nicholson to see that they were

supplied with food until some disposition could be made of them, or until he had heard from you.

Very respectfully, your obedient servant,

P. DRAYTON, *Commander.*

Flag-Officer S. F. Du Pont,

commanding South Atlantic Squadron,

Port Royal Harbor, South Carolina.

U. S. STEAMER PAWNEE, PORT ROYAL, S. C., December 21, 1861.

SIR: In obedience to your order of the 14th instant, I left this harbor at daylight of the 16th instant, accompanied by the gunboat Seneca, Lieutenant Commanding Daniel Ammen, and Coast Survey steamer Vixen, Captain C. O. Boutelle, but at the bar found that the heavy northeaster which was blowing had raised such a sea as to render it out of the question to attempt entering the rivers which I was directed to examine. I therefore returned to my anchorage, which I left a second time, however, on the following morning, and reached the North Edisto at 2 o'clock. Shortly after I crossed the bar with the Seneca, piloted in by Captain Boutelle in the Vixen, which vessel he, however, left when we were inside for the Pawnee, his vessel remaining astern of us.

At this time we could plainly see fortifications ahead on Edisto Island, distant a mile and a half. As it was reported to me they were filled with men, I commenced firing slowly from my bow-guns, as did the Seneca, but receiving no answer soon ceased, and running by the batteries anchored in the North Edisto River. On landing I found the fort, which was entirely deserted, to consist of two redoubts for five guns each, connected by a long curtain, and protected in the rear by a double fence of thick plank, with earth between, and loop-holed. The guns, as the negroes informed me, had all been removed toward Charleston some weeks back. While I was making this examination Lieutenant Commanding Ammen had proceeded up the river for about five miles, the effect of which was immediately apparent in the firing of cotton-houses and out-buildings.

As during the night some negroes came on board and informed us that at the small town of Rockville, which was in full sight, there was a large encampment of soldiers, at least five hundred, and Captain Boutelle offering to go up the creek on which it was, I determined to make them a visit in the Vixen, and at daylight on the 17th went on board that vessel for the purpose, taking with me the boats and marines of the Pawnee and Seneca, under charge of Acting Master Snell. Owing to our running ashore we did not reach the town until near 8 o'clock, a

little above which was a sloop laden with cotton and provisions, which I took possession of and towed alongside.

There being still no signs of life on shore, I landed with about fifty men to reconnoitre, and was soon satisfied that the troops had left, as the first thing seen was the negroes pillaging a building, in which was a large quantity of commissariat stores, consisting of rice, sugar, bacon, corn, etc. This I stopped at once, and had what remained removed to the Vixen.

Being then informed that the camp, which was a mile from the water, was entirely deserted, I went there, but although, so far as I could learn, the troops had left at daylight, and it was then only a little after eight, the negroes, whom I found as busy as bees, had removed the most valuable part of what had been left, which was nearly every thing, excepting their arms. The encampment was a large one, had been occupied for many months, and its late tenants had evidently been in the possession of every comfort. I removed to the boats forty Sibley and four ordinary tents, besides a quantity of articles of no particular value, which were lying about; and found at a neighboring house, which seemed to have been used as headquarters, a Confederate flag.

Having pretty well cleared the ground of what was worth removing, and being desirous of examining above, I left at 2 o'clock, and proceeding up the river with the Vixen, not liking to trust the Pawnee in so narrow a channel, came on the Seneca, which had started at 9 o'clock to explore, fast on a mud-bank. We remained by her until 9 o'clock, but found it impossible to pull her off, owing to the night tide not being as high as the morning one. While lying here, however, I sent the boats and burnt a sloop which had been run ashore some distance beyond, while attempting to escape from the Seneca, and which could not be got afloat.

The Vixen afterward returned for the night to the neighborhood of the Pawnee, but went back at daylight of the following morning with a party of men and boats from this vessel to lighten the Seneca, which vessel was got off at high tide.

While the Vixen was running up the river she came on a small sloop laden with cotton, from which two white men were taken, whom I now have on board as prisoners. As in the mean time nearly a hundred and fifty negroes, all in a great state of alarm, had collected on board the different vessels, I determined to land them on the point, and called in the United States steamer Penguin, which was cruising off the port, and to leave Lieutenant Commanding Budd in charge of the river, after my departure, until he could hear from you. Captain Boutelle

was kind enough to go out in the Vixen and pilot the Penguin into her anchorage off the fort, where she now is.

On the morning of the 10th I ran down to the South Edisto, and leaving the Pawnee and Seneca at the bar, went in with the Vixen. I found the fortifications which are on Edisto Island entirely deserted and partially destroyed. They consisted of two redoubts, which mounted, as far as I could judge, four guns each, but the guns had been removed. The Dale being in sight across Otter Island, in the Ashepoo, I made signal, and Lieutenant Commanding Truxton pulled over with four boats. He reported that every thing was quiet in the neighborhood of his anchorage, and that the fort on Otter Island was rapidly being placed in a state of defence. Up to the present time, although they had been in sight of the South Edisto forts, where we were lying, they had not yet landed there.

Having finished my examination of the South Edisto, I returned to the Pawnee and stood north, with the intention of lying off Stono for the night; but, as the weather looked threatening, and the Vixen was almost out of coal, I went into the North Edisto again for the night, in order to have an opportunity of supplying her with some. Lieutenant Commanding Budd reported every thing as when I left; but on the following morning negroes came in and stated that the troops who had left the encampment at Rockville, being largely reinforced, showed a disposition to reoccupy that place.

As the weather was too threatening to permit my making a careful examination of the Stono, as I intended, I determined now to return at once to this place and report to you the state of affairs at the North Edisto. This I have done, reaching my anchorage here at 3 o'clock to-day, although somewhat delayed by the sea raised by a very heavy northeaster which is blowing outside. Lieutenant Commanding Ammen I sent to Charleston, to report that the Penguin was in the North Edisto, and with directions to look into the Stono River on his way, and see if he could make out the fortifications, which the negroes tell me are there in great strength.

I cannot conclude without expressing my indebtedness for the ready assistance rendered by Lieutenant Commanding Ammen and Captain Boutelle in carrying out the objects of the expedition.

Very respectfully, your obedient servant,

P. DRAYTON, *commanding.*

Flag-Officer S. F. Du Pont, commanding South Atlantic Squadron.

CHAPTER XXVIII.

MOVEMENTS OF THE REBELS.—OPERATIONS ON THE SOUNDS, INLETS, AND RIVERS.

If the reader will examine a map of the coast from Charleston to St. Augustine, he will see that within the coast-line there is a perfect net-work of rivers, small sounds, bays, inlets, and connecting channels, covering the whole country adjacent to the ocean. As indicated in the preceding chapter, almost countless earthworks had been constructed to guard these water highways; forming, as they did, not only an inland channel between Charleston and Savannah, but the means of extended communication with the surrounding country. The shock occasioned by the capture of the forts at Port Royal was so great that most of these which could be reached by our gunboats appeared at first deserted, and the troops and the inhabitants, except the blacks, fled together. But ere long there were evidences of a reaction. Some deserted positions were reoccupied, bodies of troops assembled, as if with the purpose of combining for an attack, and it was evident that the rebels would attempt to recover what they had lost.

In the latter part of December one of the plans of the enemy was so far disclosed as to demand immediate attention. This plan was to shut up and capture our troops on Port Royal Island. The method proposed was to place obstructions in the Coosaw River and the channel called the Whale Branch, and, in addition to these, to construct batteries at Port Royal Ferry, at Seabrook, and at Boyd's Neck. By these they hoped to isolate the troops, prevent the approach of the gunboats, while they assembled some three thousand men at points from which

they could easily make a combined attack. This scheme it was thought necessary to defeat.

For this purpose a joint expedition was planned by General Sherman and Commander Du Pont, and, the troops having been put under the command of General Stevens, it was decided to move on New-Year's day. The naval force was as follows: the Ottawa, Lieutenant Commanding Stevens; Pembina, Lieutenant Bankhead; the four armed boats of the Wabash, commanded by Lieutenants Upshur, Luce, Irwin, and Acting Master Kempff, to enter the Coosaw by Beaufort River; while the Seneca, Lieutenant Ammen, and the tug-boat Ellen were to move up Beaufort River and approach the batteries at Seabrook and Port Royal Ferry by Whale Branch. The armed tug C. B. Hale was afterward sent forward, and the whole was placed under the command of Commodore G. R. P. Rodgers. The work assigned the Navy was, to cover the landing of the troops, to clear the woods for their advance, and silence the batteries as they were reached.

This force, having been collected at Beaufort on the 31st of December, remained there until after dark, that no intimation might be given of the proposed attack. So soon as the night had closed in, so as to conceal the vessels, they moved up to a point two miles from the Coosaw, and anchored until daylight. At 4 o'clock in the morning they moved forward to the appointed rendezvous, received on board General Stevens with his troops, and crossing the Coosaw to Heywood's plantation, where a part of the troops were landed under cover of the gunboats. Two howitzers from the Wabash were sent with the troops, to serve as a section of light artillery, under Lieutenant Irwin. At a place called the Brick Yards is a very difficult passage, through which Lieutenant Stevens with much labor succeeded in bringing the Ottawa. At 10 o'clock the gunboats and launches were stationed at the point chosen for landing the second body of the troops, so as to cover the landing and the line of march. At 1.30 p. m. General Stevens was ready to move. The gunboats took their positions, and, steaming slowly just in advance of the skirmishers, swept the woods with their shells, cleared the road for the column, and then advancing poured a heavy fire into the fort at Port Royal Ferry.

This new feature in war is deserving of more notice than it has hitherto received. So far as is known to the writer, it was an American invention, a new creation produced by the peculiar character of our struggle. In fact, it was an operation requiring for its successful performance what had no existence before the rebellion—light-draught gunboats armed with heavier guns than had been mounted before on a broadside ship. It was a combination of power that no land force could in any manner resist. The gunboats on the water and the troops on land formed the two parts of one grand column, advancing with equal movement, before which bodies of troops and field artillery were as chaff before the whirlwind, and to which even forts could offer no effectual resistance. The gunboats, armed with heavy Parrott rifles, and 11-inch smooth-bores, firing shells, grape, or canister, as the case required, keeping just in advance of the land column, could clear the front of every living thing capable of opposition, so that the troops marched on secure. The accuracy with which the rifles threw their shells rendered it unsafe for even small bodies of cavalry to show themselves within a distance of one and even two miles, and the range of grape and canister from the 11-inch guns was found to be greater than had been supposed.

Within two miles of the gunboats the rebels learned to feel unsafe, and the idea of attacking a column advancing under cover of the big guns was entirely out of the question. Within reach of these they could form no safe ambush or camping-ground, for the shells tore through the forest, scattering death with their own fragments and the splinters and limbs of trees, while the grape and canister, hurled almost by the bushel from the 11-inch guns, swept every covert in the grass and underbrush, so that there could be no safety in concealment. Wherever the Army marched within range of navigable water, the gunboats, from the celerity of their movements, might be said to form a *light artillery* of 11-inch guns, and 30-pounder, 50-pounder, and 100-pounder rifles, more effective for destruction or defence than if they could have been moved with equal speed and swiftness on the land. The gunboats were a line of skirmishers armed with 11-inch guns. The experience which the rebels had with the gunboats at Roanoke and Newbern,

at Shiloh, Belmont, Malvern Hill, and generally along all their rivers, made them objects of terror to their armies. For bodies of troops to stand within range of these broadsides was simply an impossible thing, whatever their courage or daring might be.

The enemy did not wait for the attack, and the squadron anchored in front of the battery at 2.40 p. m. A quantity of 8-inch shells and 30-pounder rifled shells were found in the magazine, but the guns had been removed. In the mean time the other vessels had succeeded in destroying the works at Sea-brook, but were unable to get up the river because of the low water.

In the course of the afternoon the enemy appeared in force and in line of battle on the right of our advancing column, where they had planted a battery of several pieces of field artillery, and had opened fire. The value of these light-draught gunboats and their heavy armament was soon seen. The Ottawa and Pembina moved a short distance down the river and opened upon the enemy a destructive fire from 11-inch and Parrott guns. The shells fell in the midst of the troops, and burst on all sides with such fatal and demoralizing effect as to scatter them in confusion, and drive them for shelter into the more distant woods, and the flank of our column was cleared.

The rebels sent a flag of truce, asking permission to carry off their killed and wounded. Before General Stevens could send a reply the gunboats, which had ceased firing for a time, reopened without knowing that such a request had been sent. Soon after, firing ceased for the night. Next morning the enemy again appeared in the woods, as if contemplating a fresh attack. Five of the gunboats at once took position, and hurled upon them a storm of shells that scattered them once more. The object of the expedition, the dismantling of the forts, and clearing out obstructions, having been accomplished, the troops were reëmbarked. The channel of the Coosaw is so narrow that the gunboats could not turn in the usual manner, and they were very often aground, yet none of them were injured, and their adaptation to this service in the tortuous river channels and shallow waters of the sounds and bays was admirably shown. Thus was frustrated one of the first attempts of the rebels to recover their lost ground.

About the same time with the expedition just mentioned, a blockade-runner was caught by the bark *Gem of the Seas*. She was cruising off the north end of North Island, when, about half-past 7 o'clock in the morning, a schooner was seen running down the coast, close in shore. The *Gem* at once tacked, and stood to the northeast for the purpose of cutting her off. The schooner thereupon hauled to the wind, and stood in for the land. The *Gem* at once tacked again, hoisted her colors, and gave chase. As the schooner refused to show any colors, a shot was fired across her bows, to which she paid no attention. A second shot was fired, which fell astern. The third one struck her, passing through her bulwarks, and glancing, passed through her deck. She, however, kept on her course, and soon passed into the north entrance, but after running a quarter of a mile grounded, and was set afire and deserted by her crew. Boats were immediately dispatched in the hope of saving her. She proved to be the English schooner *Prince of Wales*, from Nassau, one of the neutral squadron which England so vigorously maintained during the war, forfeiting a friendship which afterward she would have been most happy to regain, when, alas for her, it could not be easily obtained. Her cabin was in flames, and the wind was rapidly driving the fire forward. As the tide rose, she swung off with her head to the wind, and thus taking the flames over the stern. The sailors seized whatever came to hand, saucepans, kettles, coffee-pots, dishes, anything that would hold water, and after an hour's hard labor in throwing on water and salt, the fire was subdued. They then began to tow her out of the creek with the boats, and for a short time the prospect for a little prize-money was quite encouraging, but suddenly a volley of rifle-balls from the shore compelled them to abandon their course, and attempt to take her through the breakers. Here she grounded, and finding no channel which did not run within range of the rifles, they were compelled to abandon her, having first set her on fire in several places. When the last boat was ready to leave, and was crossing the breakers, some rebel riflemen who had crept along the beach suddenly rose up and opened fire upon them, and a running but bloodless fight was kept up until the boats were out of range. The schooner was finally consumed.

Incidents like this are recorded, not because they are in themselves of great importance, but because they serve to show the almost daily occupation of our seamen, and bring to light that continuous work of the Navy which, although hidden by the splendor of more brilliant exploits, was absolutely essential to final success, and without which the great battles could not have been fought. The daily work of the Navy was the foundation on which the war in the Southwest rested. One purpose of the officers in the neighborhood of Charleston, Savannah, Brunswick, and Fernandina, was to gather the negroes from the abandoned plantations, and locate them in colonies in order to protect them, and to provide some reliable method of supplying them with food, which at first, at that season of the year, and in the condition of the country, was a matter of some difficulty. It was an affecting sight to see these poor creatures taken away from the only homes they knew, and gathered by hundreds into encampments under the guns of our ships, where they could not have even the slender comforts of their plantation home, and where the sick and infirm old men and women, and children, necessarily suffered much; and yet they hailed the ships everywhere with delight, and regarded our sailors as deliverers, and welcomed freedom even with these hard conditions, and from the discomforts and sufferings of these rude colonies they took their first upward step in progress and civilization. Their loyalty which no suffering could diminish, their steadfast faith that the hour of their deliverance had come, appeared like an inspiration. It seemed like a spell upon every mind which kept them hopeful and believing under every discouragement. What seemed the hard necessity of gathering them up from the plantations into encampments or colonies was made by the Lord in whom they trusted the occasion of conferring upon them their first great blessing. It made it possible to reach them with teachers, and the foundations were laid of that system of instruction by which they soon made rapid progress in a true civilization.

So soon as the rebels had recovered somewhat from their panic, their first thought seemed to be to return to the deserted plantations, and gather up all the negroes that could be found, and drive them into the interior, or shoot them down in revenge

for their having favored the cause of the Union, and fled to our soldiers and sailors for protection. The islands and the adjacent country were the scenes of daily outrage and murder. Squads of rebel cavalry prowled around every accessible spot, and troops gathered where they could be secure from the gunboats, or they brought field batteries and planted them in ambush at points where our vessels would pass, or attempted to reoccupy the batteries that had been dismantled, or they scouted the country to destroy cotton that they feared might fall into our hands, or carried off or destroyed corn that the negroes might use. To watch against, meet, and defeat these ever-varying methods of attack in such a country was a service whose perplexity, labor, and peril, had no intermission by night or by day. The light-draught gunboats were constantly pushing their way through the only half-fluid water of the narrow and shallow channels, and their boats in every direction along the creeks, exposed ever to hidden riflemen. The negroes could not be sent to gather corn without the guard of one or more boats and a howitzer; and when it is considered that some of the colonies numbered more than a thousand, it will be seen that the task of collecting food for them under such circumstances was by no means a small one. But the Navy was, in this, performing a work nobler even than fighting great battles. It was helping to lay the foundations of a new civilization for four millions of people; it was the beginning of the successful solution of the great problem of free labor and civilization for the enslaved race; it was an experiment which settled the question in favor of freedom forever. The sailors and soldiers who protected and fed the freedmen of the Sea Islands, the far-seeing Christian philanthropists who at once arranged to send them teachers, the noble men and women who offered themselves for that service, performed one of the most heroic and important works of the war.

The gunners, by daily practice, became so skilful in the use of their immense rifles and smooth-bore shell-guns, they learned to calculate distances by the eye with such wonderful accuracy, so as to decide whether a five-second, or ten-second, or fifteen-second fuse was needed, that it was a very perilous thing for even a small company of rebels to show themselves within range, and these squads often made fatal mistakes in miscalcu-

lating the distance at which a shell could reach them. In this manner the rebels were prevented from making any formidable concentration of troops for the recovery of the islands, for the dreaded gunboats could shell them out of any position ; and thus effectual protection was given to the negroes, who ere long, under the guidance of their friends, began to show the rudiments of social order, and started in that progress which, though the first steps were slow and painful, was not afterward seriously interrupted.

Inasmuch as, early in 1862, the means were not at command to attempt the reduction of Fort Pulaski, it was thought possible that some channel might be discovered whereby the Savannah River might be entered by our gunboats above the fort, and so communication would be cut off between it and Savannah ; or, if it should be found impracticable to enter the river, it was deemed probable that some one of the numerous channels would permit the gunboats to approach near enough to command the river with their guns. On the first of February an expedition was fitted out under the command of Fleet-Captain C. H. Davis, for the purpose of making this reconnoissance. It consisted of the *Ottawa*, Lieutenant Stevens ; the *Seneca*, Captain Ammen, and the armed steamers *Isaac Smith*, *Nicholson*, *Potomaska*, and *Watmough* ; the *Ellen*, the *Western World*, and two armed launches, and the transports *Cosmopolitan*, *Delaware*, and *Boston* ; on board of which were twenty-four hundred men under the command of Brigadier-General H. G. Wright. The object of this reconnoissance was to explore the channels connected with Wassaw Sound. In this sound the fleet anchored for the night. The next morning, owing to the shallowness of the water and the difficulties of the channel it was half-past 8 o'clock before they could enter the passage called Little Tybee River, or Freeborn Cut, a channel which passes within long rifle range of Fort Pulaski, on its southern face, which was not prepared for an enemy on that side. The fleet, therefore, was not fired upon from the fort as they passed it about half-past one o'clock, but the garrison could be seen actively engaged in making preparations to open upon them on their return. Soon after passing the high land on Wilmington Island, they came to a double row of heavy piles driven across the channel, which

prevented the further progress of the gunboats. Presuming that, as usual, batteries had been erected, by which these obstructions were commanded, boats were sent on shore, and a thorough examination made, but no traces of such works were discovered. The rebels, as soon appeared, depended upon their fleet to aid in guarding the channel. At 5 o'clock this fleet of five steamers, under Commodore Tatnall, came down the Savannah River and anchored in the mouth of the creek. As our gunboats could not pass the piles, the rebels had the power to choose their distance, and a battle was expected. The night, however, passed quietly. The next morning the rebel steamers attempted to pass down the river with some scows in tow, when our gunboats opened fire upon them, and after a fight of half an hour, the enemy's flag-ship and one other steamer were driven back, and the other three escaped without injury and went down to Fort Pulaski. One of the steamers driven back was said to have sunk at the wharf after reaching the city.

At 2 o'clock the three steamers returned from the fort, and the fight was recommenced. It was, however, then low water, and the decks of the steamers on both sides were sunk almost to the level of the marsh between them, and the shot which on the water would have reached by ricochet, spent their force generally in the marsh. As a fight, it was of very small importance. Pulaski was passed on the way back before daylight, and they were not perceived. As a reconnoissance, it produced some valuable results. Information was gained which served to shape the future operations of the fleet and army. Savannah was thrown into great excitement, and troops were brought from other points to strengthen its defences. It was feared that our fleet would soon be before the city. It was found, however, that although the cut could be navigated without difficulty, yet it would require that Wilmington Island should be occupied with a strong force, and works which would probably require more time and labor than the erection of batteries for the reduction of Fort Pulaski. Gunboats could not lie in safety in any part of the narrow passage, with the island in the hands of the enemy, and, with Pulaski also in their possession, they would soon find the means of planting guns so as to prevent the safe passage of a fleet.

Soon after the last-named expedition, an attempt was made to discover an entrance into the Savannah River on the north side, and above the fort. Wright River is one of the approaches to Savannah, and has two entrances to the Savannah River, one through its mouth, and one through a branch called Mud River. These are little more than cuts or natural canals through the marshes. Mud River is bare at low tides, but the bottom being semi-fluid, gunboats can be pushed through in the high spring tides. Wright River has only four feet of water on the bar at low tide, and eleven at high tide. Considering the mud in which our gunboats were compelled to operate in these Southern bays and creeks, one sees why Mr. Lincoln applied to them the term "web-footed." Operating as they did with land forces, often forming a part of *land expeditions*, and floundering in mud, they might be said to belong to the amphibious class of vessels. At one point, Wright River approaches Fort Pulaski within one mile and three-quarters, and consequently within range of its guns, though the distance is too great for accurate firing. The expedition examined and staked out both of these passages, being a part of the time under the fire of the fort, which, however, did them no damage.

At this time the army was engaged in erecting a battery on Venus Point, for the purpose of commanding the Savannah above Pulaski, and cutting off its supplies from the city. This point is within range from the mouth of Mud River, and, in order to protect the working-parties, one gunboat was moored across Mud River, with her broadside bearing up the Savannah River, and the other was anchored parallel with the channel, with her battery sweeping the right flank of the shore battery. In this manner the soldiers were protected both against Tatnall's fleet and an attack on land. On the 14th of February the rebel fleet came down, four in number, for the purpose of driving the soldiers away, but, with the aid of the guns already mounted on the battery, they were repulsed and driven back. At the mouth of New River the rebels had constructed a boom with great care and skill. This the gunboats removed, and towed it down, and moored it across the mouth of Mud River, within reach of grape and canister from the gunboats. This was necessary both to guard against fire-rafts, a favorite weapon of the rebels, and to

prevent an overwhelming attack of boarders from boats, a thing to be apprehended, because the steamers moored in Mud River were much of the time aground. At night, and in case of fog, which prevented the boom from being clearly seen, picket-boats with signals arranged, were kept on duty, so as to give timely warning of the approach of an enemy. These show a part of the operations of the Navy in giving at all points support and protection to the army while preparing those works which soon enabled them to command the Savannah River, and to compel the surrender of Fort Pulaski.

During these operations the rebels were not idle. Soon after this reconnoissance, and the staking out of the channels just mentioned, while the sailors were placing buoys to mark the course, a torpedo was discovered at the mouth of Wright River, in the very channel selected for the passage of the gunboats. It consisted of five metal cases which served as air-chambers, and buoys for five others which contained about thirty pounds of powder. They were so fastened as to be covered by water whenever vessels could pass the bar, but were exposed at low water. As it was a somewhat dangerous machine to handle, a rifle-ball was fired through it, when it exploded, but the machinery was uninjured, and could be thoroughly examined. The exploding charge was connected with a common friction primer, and that connected by a string with a wire coiled in the top of the buoy. The passing vessel was expected to strike the buoy, draw out the wire, and explode the charge. Several of these infernal machines had been placed at the mouth of Wright River. They appeared at first sight like empty tin cans, and were thought worthy of no attention. Lieutenant Sproston, however, of the Seneca, having observed them more closely, suspected that they might be buoys of torpedoes, and communicated his opinion to others, and it was determined to examine them. It was soon found that these suspicions were correct. They were left until the next day, and about midnight one of them exploded just after the launches of the Susquehanna, with a flat and artillery for Point Venus, had passed. The next day these boats were sent out, provided with grapnels and lead-lines, so that the buoys might be grappled at a safe distance. They caught the wires, but could not, by pulling, produce an explosion. With great

caution they then cut such connecting wires as they could reach, and the next day the remainder were sunk by firing rifle-balls through the buoys. Thus far, the torpedo system of the rebels was a complete failure. Neither on the Potomac River, nor at Newbern, nor in this case, had any damage been done. Subsequently, however, they demonstrated at Charleston, Mobile, and other places, that torpedoes may be used with deadly effect in coast and harbor defences, and the attention of scientific men, both here and in Europe, was seriously turned to the question whether the torpedo will not hereafter become a regular weapon of war, and perhaps the most formidable on the list. Should this be so, and should the results now clearly indicated by experiments with the new heavy artillery be attained, scarcely a trace will remain of the old methods of warfare on the water, or in fortifications for coast and harbor defence. The old navies of the world, and the huge old stone and brick forts, may be regarded already as worthless rubbish; granite, cased with iron, is demolished by the 15-inch smooth-bore and 12-inch rifled gun, and it seems difficult to conceive of any defences which will resist the stroke of the 20-inch shot.

On the 14th of February a boat expedition was sent by Lieutenant Conroy, commanding the armed bark *Restless*, into Bull's Bay, in search of any small craft that might be found in that vicinity. Inside the shoals they discovered four small vessels, three schooners and one sloop, that were loaded with rice, and were going through the inner passage to Charleston. They had on board nearly eight thousand bushels of rice. The vessels and their cargoes were burned. By operations of this sort, which were continually carried on in all directions, the trade on the inner channels was interrupted or broken up, while the blockaders intercepted to a great extent that which came by sea, and thus every week the resources of the rebels were diminished. At every point the power of the Navy bore heavily on the rebellion. It stretched an almost impenetrable wall along the coast, the heavy vessels demolished their forts, the *web-footed* gunboats seemed to be able to go wherever there was soft mud, and the small boats searched even the little creeks so thoroughly, that few movements of the rebels escaped their scrutiny. Such was the activity and apparent omnipresence of

the gunboats, that the negroes felt, in their surprise and ignorance, the utmost confidence that the "Linkum ships" would protect them though they might be twenty miles away.

The nature of the warfare which the rebels waged, and the perilous nature of the service on these rivers, is well illustrated by the attack in which Lieutenant Budd lost his life. In March this valuable and lamented officer organized a boat expedition from the Penguin and the Henry Andrew to proceed from Mosquito Inlet on the Florida coast, and make a reconnaissance through a passage leading into Mosquito lagoon. The expedition consisted of five light boats, which carried forty-three men. They passed on some eighteen miles without any accident, and without seeing an enemy. On their return, and when within sight of their vessel, the two commanding officers, quite in advance of the party, landed at some abandoned earthworks which were surrounded by dense thickets. Here a murderous volley was poured into them from an ambush, by which Lieutenant Budd, Acting Master Mather, and three of the five seamen composing the crew were instantly killed, and the remaining two wounded and taken prisoners. A heavy fire was also opened upon the remaining boats as they came up, and they also suffered severely, without being able to offer any effectual defence. This was one of the most unfortunate of the smaller expeditions of the Navy. Doubtless there was a want of proper precaution, or the useless sacrifice of life would have been avoided, but they who committed the error expiated it with their own lives. Of the forty-three composing the expedition, eight were killed and seven wounded, more than one-third of the whole; and for this severe loss no compensatory advantages whatever were gained. It was a useless sacrifice to the spirit of adventure.

Another and still more severe case of sudden attack, characteristic of determined men, and agreeing with the spirit in which so much of the war was conducted by the rebels, occurred in March, near Brunswick, Florida. On the afternoon of the 11th of March, the assistant surgeon of the Pocahontas, A. C. Rhodes, landed with a boat's crew for the purpose of procuring some fresh beef for the ships. Having received the meat and paid for it, he started to return to his

ship. He had scarcely gone fifty feet from the beach, when he was fired upon by a company of rebels concealed in a thicket, and two of the boat's crew instantly killed and seven wounded. *After* the fire, not before, they called to them to surrender. Surprised as were the boat's crew, and almost disabled by the murderous fire, they bravely refused to surrender, and pulled with their remaining strength for the ship, the rebels continuing their fire. Fortunately, the attack was observed from the Mohican, and just as a company of sixty were hastening at double-quick to join those who had fired on the now defenceless boat, an 11-inch shell dropped in their midst and sent them scattering in all directions. This relieved the boat, and almost immediately the Pocahontas and Potomska opened from some of their shell guns, and these concealed foes were driven away. They ran in confusion to some railway cars, the shells bursting among them as they went, but of course they sent back no account of their losses. Such was the promptness and activity on board the ships to rescue their comrades, that before the crippled boat was out of range of the rifles, Lieutenant Balch of the Pocahontas reached them with his own boat, and took them in tow. The bravery of the men left in the crippled boat, the promptness with which the Mohican trained on them her pivot-gun, and the rapidity with which the boat of the Pocahontas was manned and pulled to their relief, deserve to be held in remembrance.

In June one of our most esteemed officers was murdered at Mayport Mills, Florida, on the St. John's River. George Huston, a most desperate character, was the captain of a company of guerillas who committed savage outrages on all Union men, and the usual barbarities on such prisoners as fell into their hands. Huston boasted that he had hung the negro pilot taken prisoner when Lieutenant Budd lost his life, and probably the savage boast was true. Captain Ammen, of the gunboat Seneca, thought it important to secure this man, and Lieutenant John Sproston, the executive officer of the ship, was sent on shore with seventy men to take him prisoner. He landed at daylight, and proceeded to his house. Huston had been apprised of his coming, and armed with two pistols, a double-barrelled gun, and a knife, met him at the door, and shot Lieu-

tenant Sproston dead. He then fired his other pistol and double-barrelled gun, but no other one of the party was struck. Huston was of course shot down, mortally wounded, and was taken on board the vessel. Lieutenant Sproston was a highly accomplished and valuable officer, and great indignation was felt throughout the Navy that a noble and true man should be murdered by such a wretch.

No adequate idea can be given of the operations of the Navy by merely selecting important engagements, and confining the narrative to these. It was the daily work of the officers and seamen, the unending succession of toils and perils, amid the marshes and mud channels and ambushes of this Southern coast which the country should know in order to estimate aright what was performed and suffered by this branch of our service. The work of the Navy was entirely different from what ships and seamen had been before called upon to perform, except as occasional service. Never before had it formed the main business of a great war. The history of the naval wars in Europe is a narrative of the combats of squadrons and single ships on the ocean, and in the same manner the interest of our naval war of 1812 centred upon battles between ships, and all else presented only the common routine of the sailing of the ship. These sea-fights, therefore, formed almost the sole material for the history. But in the war of the rebellion, with the exception of the fights between iron-clads, and the one battle between the Kearsarge and the Alabama, the combats at sea were few and comparatively unimportant. It was not a conflict of one navy with another, squadron with squadron, or ship with ship, but with forts and batteries, and ambushed riflemen, and torpedoes, and hidden obstructions—a service partly on land with ships' light batteries, partly on water, and partly in the mud, where there was neither land to stand upon nor water to float in. It was a work entirely unique, an incessant labor, with scarcely enough of stirring incident to keep up the spirit of the men, and yet one whose value in the aggregate no history can adequately describe. The only thing which can be done is to present a brief narrative of events as they occurred.

This narrative is often best given in the very words of the

officers who were engaged, and the following accounts will show something of the daily operations of the gunboats and their crews in the neighborhood of Charleston and Savannah during the few weeks that preceded the fall of Fort Pulaski.

NIGHT RECONNOISSANCE AT BEAR'S BLUFF, NORTH EDISTO.

U. S. STEAMER CRUSADER, NORTH EDISTO, *March 3, 1862.*

SIR: On the 23d instant I received information that the enemy were building a battery at Bear's Bluff, opposite White Point. On the night of the 24th, accompanied by Lieutenant Prentiss, I went up in our dingy, with three men, and landed without being discovered by the guard. Lieutenant Prentiss and I went up and found the battery in an unfinished state, and looking about us, discovered the magazine; found two of the picket-guard asleep in it; got one musket from beside them without awakening them; returned to the boat, and brought up two of the men to secure them. In doing so, I regret to say, one of them was shot through the head and instantly killed, the pistol in my hand going off accidentally in the struggle. We carried both to the boat, and escaped without discovery.

The picket-guard at the battery that night consisted of fifteen infantry and two mounted men, in command of a lieutenant, so the surviving prisoner states. We buried the other properly the next day near the camp of the Forty-seventh regiment. His name was Joseph A. Wilson, company C, Moore's battalion, stationed at Church Flats; the other, now on board this vessel, is William M. Evans, from Rabun County, Georgia, of the same company. According to his account, there are two regiments at Church Flats, sending pickets out regularly to Rockville, Bear's Bluff, and other points on the east side of the river; their men ill-fed, not paid or clothed, and badly treated. Wilson was from Pickens District, South Carolina. The musket we have taken from them is of the Enfield pattern, has the Tower mark, date 1861. Both cartridge-boxes contained Ely's London stamped cartridges.

I sent a boat, in charge of Lieutenant Prentiss, into Rockville on the night of the 28th; but they were discovered, though proceeding cautiously, and a volley fired into them as they touched the shore, without hitting any one, however. Having orders to return, if discovered, they withdrew. The bad weather to-day prevented my going up the river, as I intended.

We have picked up several contrabands from the east side lately; one, coming from Charleston, reached here by way of John's Island in

twenty-four hours. Though arrested by a picket and detained on the way, he succeeded in escaping again at night.

Very respectfully, your obedient servant,

A. C. RHIND, *Lieutenant commanding.*

S. F. DU PONT, *Flag-Officer,*

commanding South Atlantic Blockading Squadron.

EXPEDITION TO BRUNSWICK.

U. S. STEAMER MOHICAN, OFF BRUNSWICK, GEORGIA, *March 10, 1862.*

SIR: I have the honor to report that, in obedience to your order of March 5, I left Fernandina on the morning of the 8th, accompanied by the Pocahontas, Lieutenant Commanding Balch, and the Potomska, Acting Lieutenant Commanding Watmough, and crossed Fernandina Bar with just water enough to comfortably float this ship, made the best of my way to St. Simon's Bar, and reached it at dead low water, passing it, and getting into St. Simon's Channel, through which I carried about seventeen feet to within two miles of the forts, which we could plainly see, commanding St. Simon's entrance.

Here, at sundown, I anchored for the night. After dark I shifted the anchorage of the ship, to alter the range of any guns that might be left in the batteries. At daylight made preparations to pass the batteries, and at sunrise weighed anchor and stood in. Soon discovered that the batteries were evidently abandoned, and anchored my little force inside and beyond range of the guns, and made signal to land from the vessels. Lieutenant Commanding Balch, of the Pocahontas, with three boats, took possession of the fort on St. Simon's Island, consisting of strong earthworks of considerable extent and having had eleven guns mounted. Some solid 10-inch shot found in the fort would indicate the calibre of some of the guns there. I enclose a detailed report of that battery by Lieutenant Commanding Balch. Lieutenant Miller, of this ship, at the same time occupied the fort on Jekyl Island, which was, it seems, a much stronger position. It was a sand-work, with five casemates finished, covered with railroad iron and very well built, and two unfinished casemates, the iron rails ready to be put up. These two forts commanded the channel for a long distance, and their fire crossed the entrance, which is about a mile (or a little more) wide. Once the batteries were passed, they could offer but little difficulty, as in five minutes the guns of the vessels would have enfiladed them, and could even fire directly in the rear; but they would have given a number of vessels severe trouble in getting beyond them. I enclose the report of Lieutenant Miller of the fort on Jekyl Island.

As soon as the boats returned I went on the Potomska, and proceeded in her up the river to Brunswick. So soon as we opened the town to view a heavy fire commenced at the wharf, and, at the same moment, we perceived the railroad cars moving at full speed in the woods. I at once determined to bring up the ships and place myself off the town, in hopes of preventing by my presence the place from being burned, and I at once returned in the Potomska, as I had the pilot with me. Both the Mohican and Pocahontas were under way before I reached them, and we proceeded to Brunswick, off which place I anchored as the sun went down. The cars had returned, but again started at our approach. The Pocahontas anchored opposite the town, but outside of Buzzard Roost Island; the Potomska still higher up, and her guns commanded the railroad beyond the town. The following morning I sent the Potomska into the branch opposite the town. Neither this ship nor the Pocahontas can well get in, as at high water only twelve feet was found in the bulkhead, and between the wharf and Buzzard Roost Island the river is but about four hundred feet wide.

With the Potomska, Lieutenant Balch took charge of a landing party, consisting of twenty-five marines from this ship and the Pocahontas, and two 12-pounder guns, with forty riflemen from the different vessels, landed, and hoisted the flag. The place was deserted, and most of the furniture of the houses removed; still there was much private property about, some in scows on the wharf, ready to be removed. After a careful examination of such buildings as might be supposed to contain public property, and a careful survey was had, I visited the town, and then directed the command to return to the ship; having posted a notice urging the inhabitants to return, and promising protection to all property for all good citizens. I enclose Lieutenant Balch's report of his landing, etc. Nothing in the place was touched by the landing party, and such houses as were not open were not even entered. I sincerely hope that at least some good citizens may be found willing to resume their homes under my public notice, and I shall not allow the place to be visited except on duty.

The fire we noticed was the work of retiring soldiers, and proved to be the railroad depot and wharf. The lenses belonging to the light-house were not found; the channel buoys for the river are in the river, but out of place, and the light-house destroyed. The town is closely surrounded by woods, is generally well built, and extends over a considerable space. Several contrabands have come on board. Soldiers are said to be in the woods, not very distant, and most of the inhabitants are said to be about fourteen or sixteen miles back, encamped. I

have sent the Potomska and Pocahontas up the river, as far as they could go, to reconnoitre. There is a schooner of considerable size on the stocks unfinished. Fires have been burning about us, but I believe it is the brush being consumed; nor have I noticed, as far as the people are concerned, that they are willing to follow the advice of Messrs. Tombs and Cobb, by placing the torch in the hands of the children to consume their property. All that is done in that way seems to be done by the order of military commanders, who, having no local interest in the neighborhood of their commands, have the heroism to consume the property in which they have no immediate interest.

I am, very respectfully, your obedient servant,

S. W. GODON, *Commander and Senior Officer.*

Flag-Officer S. F. DU PONT,

commanding South Atlantic Blockading Squadron.

RECONNOISSANCE FROM BRUNSWICK TO DARIEN.

*

U. S. STEAMER MOHICAN, ST. SIMON'S ISLAND, March 16, 1862.

SIR: I have the honor to report that on the 13th instant I started in the Potomska, accompanied by the Pocahontas, with the launch and howitzer of this ship, in charge of Lieutenant Miller, in tow, and proceeded through the inland passage toward the Altamaha River.

I had heard that there were one or two rebel steamers at Darien, and I hoped that I might get possession of them. About five miles from the anchorage at this place, and where I had left the Mohican (between the batteries), we found, as I had heard from contrabands, that the river was staked entirely across. We reached the spot at low water and found a double row of heavy piles, with their heads just above water. I at once got to work with both vessels, and in a few hours hauled enough out of each row to allow a passage for both vessels, say forty feet, and here for the first time I learned that about five miles beyond another obstruction of the same kind had been placed. We reached the second difficulty at midnight, placed our hawser, as the tide was rising; but unfortunately the hawser disengaged itself from the pile, and in the night, with the rising tide, we could not find them to go on with the work, and my hope of passing through during the night was lost. My object was to get into the river so as to make a dash up to Darien by early daylight; we, however, worked hard that day, and by twelve o'clock got through the last obstruction. Between the two obstructions, midway, a battery had been built of mud, with the seeming object of firing at the vessels employed in removing the piles, but which could not be observed from those vessels.

As we passed the second obstruction and turned the river, we saw the steamers moving off from the wharf at Darien with full head of steam, going up the Altamaha River.

At sundown I anchored both vessels at Doboy Island, passing to reach that spot, which is on the Altamaha River, through Mud River at high water, with just twelve feet. We remained that day at Doboy, the wind blowing quite a gale from southwest to west.

As I had lost hope of the capture of the steamers, and observing several large fires in the neighborhood of Darien, I determined to proceed no farther at this time, more particularly as we found that the brasses of the Potomska's shaft-bearing had broken, and I feared she might become disabled. I had indeed accomplished my object, which was to open the inland passage to Darien, and if the Potomska had not been in, what I fear, a crippled condition, I should have placed her at Doboy, which commands the river outlet, or at Sapelow Island, which commands the entire entrance to the Altamaha and the island passage to Savannah.

Darien has been deserted, as was Brunswick. This we learned from some contrabands who came off to us, a company of horsemen only remaining in town, with the intention of firing the place should we approach it.

I have now been from one end of St. Simon's Island to the other; but one white man is left in it. I saw him; he is with his aged mother and little child. He had never been in the army, refused to leave his home, and was in mortal dread of our coming, as the military informed him that we came for the purpose of destroying even the women and children. We procured beef for the vessels at his plantation, for which we paid the price he asked, and furnished the family with some articles, such as coffee, salt, etc., which articles they had not even seen for months. We stopped at one or two other plantations on our way back, all deserted, but had been tenanted by the military at various times, for as late as November some one thousand five hundred troops were quartered on St. Simon's. We found some of the places to contain large quantities of cattle, and at King's plantation, not three miles from this anchorage, we counted some fifty head near where we landed.

All the blacks have been removed from St. Simon's, and at Doboy we met the only negro seen, who was old and alone on the place. He had been the father of thirteen children, but he informed me that every one had been sold as they reached about eighteen years of age, and, as he graphically expressed it, "for pocket-money for his master."

Your orders did not embrace the reconnoissance I have just made,

and which has caused a delay of several days in communicating to you my progress to Brunswick. I hope, however, you will approve my conduct in the matter.

I have now cleared the passage to Darien from inside, which can be performed rapidly by gunboats of ten feet draught at any time; at low tides eleven feet; the draught of the Pocahontas and Potomska is rather great, as they might be caught and delayed for higher tides.

I now beg leave, sir, to express myself in warm terms of commendation for the energy and skill of Lieutenant Commanding Balch and Acting Lieutenant Commanding Watmough, and for the aid they have rendered me in the active work we have been engaged in for the last eight days, and I take equal pleasure in mentioning the cheerfulness in this work of the officers and crews of the three vessels engaged. * * *

I cannot speak too highly of the service rendered by Mr. Godfrey, the pilot. I have the honor to be, etc.,

S. W. GODON, *Commander.*

Flag-Officer S. F. DU PONT,
commanding South Atlantic Blockading Squadron.

BATTERIES ABANDONED ON SKIDDAWAY AND GREEN ISLANDS.

UNITED STATES STEAMER SEMINOLE. ABREAST OF }
SKIDDAWAY BATTERY, WILMINGTON RIVER, GA., *March 25, 1862.* }

SIR: In obedience to your order dated 2d instant, we proceeded from Cumberland Sound to Wassaw Sound, Georgia, to blockade as directed. Having waited some days for the weather to settle and the wind to lull, we this afternoon felt our way with the lead up the narrow channel of the Wilmington River to the battery on Skiddaway Island, accompanied by the Norwich, Lieutenant Commanding J. M. Duncan, and Wyandot, Lieutenant Commanding W. D. Whiting. I sent our launch, with the howitzer and crew, under charge of Master McNair and Acting Master Steele, alongside the Norwich, and went on board of her. She being the shortest vessel, and of lightest draught, was sent ahead. After firing a shell or two at some horsemen near the house on the left, and a picket-guard at the fort, as we approached, I proceeded in the gig, with Paymaster Sands, to the shore, followed by the launch. We found the battery a strong bastioned work for ten guns, with bomb-proof trenches, etc. The enemy had abandoned it, leaving imitation guns, covered with canvas, in position. Other boats from the vessels coming on shore, we destroyed the works, boats, lighters, etc., of the enemy, and having hoisted the Union flag over the fort and house with the red cupola, we returned on board our respective vessels. I learn that the Confederate battery on Green Island is aban-

doned. Several houses in sight are burning this morning, the red cupola house included. I send to Port Royal a prisoner taken in the marshes by the Release. His statement accompanies this.

I am, sir, respectfully, etc.,

JOHN P. GILLIS, *Commander*.

Flag-Officer S. F. DU PONT.

CONTRABAND'S STATEMENT.

UNITED STATES STEAMSHIP SEMINOLE, }
WASSAW SOUND, GEORGIA, *March 26, 1862.* }

SIR: The following statement is derived from London Middleton, a contraband picked up this afternoon by the Norwich, and sent on board this ship, viz.:

His master was William P. Fulton, of Savannah. He left that city on the 22d instant (Saturday), coming by way of White Bluff and Green Island to Raccoon Keys, from whence he expected to reach a "saw-mill," which it was said he had on Wassaw Island, with three thousand troops.

All provisions are scarce at Savannah, and very dear, particularly bacon, rum, liquors, and "such like." Fresh beef is plenty, but costs twenty-five to thirty cents for what used to sell at six, eight, and ten cents per pound. Eggs were selling at fifty cents per dozen; chickens \$1.50 per pair. Tea scarce; coffee selling at \$1.50 to \$1.75 per pound. They are "very bad off" for rum and liquors, and "almost have to give them up," and these, with bacon, they expected from the West, somewhere where the Federals now hold possession.

Folks are "going and coming." Some who had left are returning, and they are sending the "negroes and cotton" inland, and moving all the "cash money" to Macon, and threaten to burn the city if they should be unable to hold it, and are in daily expectation of our attack. They had given up the idea of defending the Savannah River by torpedoes, because one of the principal men who was sinking them got drowned while down in a diving-bell, and they now talk of piling the river across. He knows of *no raft* near Fort Jackson, near which Tatal is, on board the Savannah (late Everglade). When he was last near Thunderbolt, some time since, they had eight guns mounted. There is a battery (number of guns unknown) at Costan's Bluff, and they said they were mounting guns at "the old fort" above Fort Jackson, below the "gas-house," and near the first ferry wharf; but he knows but little of this part of the river, having been a fisherman around about White Bluff and Green Island, but more recently waiting on the soldiers.

All the approaches to the city, not only main, but also the by-roads, are being fortified, and they told him that "they had one hundred thousand men."

Green and Skiddaway Islands are abandoned except by a few cavalry. The guns from Green Island were taken to fortify Benley, and those from Skiddaway to Montgomery (a part of Benley, but about three-quarters of a mile separate), both on the Winingberg River, which runs from Raccoon Keys up, making Green Island, the first land to the northeast going up, and thence running up to Benley, Montgomery, and White Bluff.

They expect us to cross Skiddaway Island, and have guns and pickets at the two bridges to cut them away and fight our forces on their arrival. The first bridge is reckoned to be five miles across from the cupola house (last night burned by the rebels), near the Skiddaway abandoned battery. Respectfully, etc.,

JOHN P. GILLIS, *Commander.*

Flag-Officer S. F. DU PONT.

CHAPTER XXIX.

FALL OF FORT PULASKI.

AFTER it was discovered, by the reconnoissances made both on the north and south side of the Savannah River, that the ships could not be safely carried through any of the channels into the river above the fort, the attention of both the Army and Navy was turned to the erection of batteries by which Pulaski could be invested and bombarded.

As the Navy was still connected with these operations, and as the bombardment of this work illustrates the power of the new American ordnance, a subject which forms a prominent feature in this history, it was thought that some account of its capture would not be out of place. The construction of the battery at Venus Point, to which reference has been already made, is also worthy of notice, as showing the nature of the exposure and toil of the daily service performed by soldiers and sailors in the pestilential marshes of the South. The object of this battery was to interrupt communication between Pulaski and the city.

Jones's Island is simply a marsh, mostly covered at high tide with water, except the marsh grass and weeds. It lies between Mud River, Wright River, and the Savannah, and the inland side can be reached by gunboats through Mud and Wright Rivers. From the point where steamboats could reach the island in the rear, to the opposite spot on the Savannah where the battery was to be placed, was one mile, and the question how heavy siege guns were to be transported that distance, through or over the mud and water, was one not easily to be solved. Still it was necessary that the solution should be

attempted ; and once decided upon, both men and officers were determined that it should succeed, not only on account of its intrinsic importance, but because of the influence which would be excited, both upon our own men and the rebels, by the performance of an almost impossible work.

On the night of the 10th of February a party of soldiers struggled through the marsh, and partially laid the platforms for the guns. The next night the guns, 32-pounders, were embarked on flats at Daufurkie Island, and towed by small steamers across to Jones's Island. Then they were landed, if *landing* it could be called, not upon, but *into* the marsh. Poles were first laid across the proposed path, forming a rude corduroy, and on these planks thirty feet long were laid for the gun-carriages, and these planks were shifted ahead as the guns were moved on. The first thing was to place the guns, weighing three tons each, on a pile of sand-bags called a wharf, and then start them along the extemporized wooden railway. The nature of the work may be conceived, by thinking of the men in the night in a heavy storm in the winter, floundering in mud and water-pools, often up to their waists, pushing and dragging the guns along a track sunk in the mud, the carriages constantly slipping off or running off the planks, and sinking in the mire, from which position they were to be lifted and dragged back to the track again. It is not surprising that during the whole of the first night the guns were moved only two hundred yards. The next night the soldiers were more successful, and the guns were got across the marsh and placed in position on the platforms, and the next morning when Commodore Tatnall's fleet appeared, they were confronted by the guns of the new battery, and compelled to return. The men were so overpowered by this exhausting labor and exposure to storm and water, that they would lie down and sleep in the mud of the marsh.

As an engineering feat, and as testing the courage and endurance of our men, probably this was scarcely surpassed during the war, but there were many others showing similar determination and daring. To aid this battery, two gunboats were immediately moored in Mud River, as has been previously stated. By the erection of two other small batteries, the work of cutting off Pulaski from supplies was completed, and then the

army began the erection of the works by which the fort was to be reduced, the Navy giving to them in all ways its full support. These batteries were erected upon Tybee Island, which lies to the southwest of Pulaski, and about one mile distant at the points where the siege guns were placed. The surface of the island is sufficient to conceal the batteries from the fort while they were being erected, so that the working-parties suffered little from its fire. Here also the labor of loading and transporting guns and ammunition was immense. A heavy surf made the work of landing the enormous cannon—some of them 10-inch columbiads—a very dangerous one, and then they were to be dragged two miles through the sand by the soldiers themselves. Here was to be made a new and very important experiment in breaching the walls of a strong casemated fort. It had before been considered as settled that such walls could not be breached at a greater distance than eight hundred yards; and it is well to remember this, as the limit which the nations had then reached in the use of artillery, and this will show the extent of the revolution which has been wrought in the world's opinions by the experiments of the war, and by the new American cannon.

The batteries planted before the fort were eleven in number, and were armed with 13-inch and 10-inch mortars, 10-inch and 8-inch columbiads, 30-pounder Parrott rifles, and 24, 32, and 42-pounder rifles, with James's projectiles. Four of the columbiads and the rifles were placed about one mile from the fort, others of the columbiads for shell-firing, and the mortars, were planted about two miles distant. The fire of the columbiads, using solid shot, and the largest rifles, was concentrated upon a single point in range of the magazine, for the double purpose of breaching the wall and of reaching the magazine. The firing continued for thirty hours, but the walls were breached in a little more than half that time. On the second day the fire from the batteries was far more effective. The range of the guns had been obtained, and a very large proportion of the shot and the shell from the rifles reached their mark. The wall was breached opposite the magazine so that an assault was practicable. The shells and shot passed through this, and tore away the defences of the magazine, so that it was liable at any moment to be exploded by a shell; and the commander, deeming

that he was exposing the garrison to destruction, with no prospect of ultimate success, hauled down the traitor flag and hoisted a white one.

So confident were the rebel officers in the established maxims in regard to the effective range of artillery, that they felt entirely secure, although they knew that works were being erected on Tybee Island, believing that the walls of the fort, said to have been sixteen feet thick, could not be penetrated at that distance. As this was the first trial of the solid shot of the 10-inch columbiad, and of the new rifled guns against a well-constructed fort, it excited the liveliest interest throughout the country and in Europe. Inasmuch as the rifled gun was then a new weapon for breaching purposes, it drew to itself the chief attention of the country, and the effect of the heavy spherical shot was overlooked. Although there is no method by which the comparative effect of the rifles and smooth-bores can be measured, inasmuch as the fire of both was concentrated upon the same spot, yet enough is known to show that while the projectile from the rifled gun had greater penetration, being much smaller, it was what eye-witnesses called the *trip-hammer blow* of the ponderous 10-inch shot, that shattered the solid masonry and hurled it in masses down. The small shot, moving with great velocity, bored into the brick-work like a drill; the solid mass from the columbiad shook and loosened the masonry far beyond the point of impact, and would necessarily in time reduce it to a crumbling ruin. The smaller rifle projectile may bore the wall like a honeycomb, but not *shatter* it extensively; while the massive shot, whether from a rifle or smooth-bore, produces an entirely different effect, loosening on all sides the joints of the masonry, and breaking up instead of cutting through the material. The greater range of the heavy rifle renders it of course more effective at a great distance, as was afterward shown at Charleston; but the stroke of a heavy mass, from whatever gun it may be thrown, is needed to demolish the walls of a fort or the armor of an iron-clad. The fall of Pulaski showed, as many then believed, that the era of stone and brick forts was gone, as completely as that of wooden ships was closed by the battle of the Monitor and the Merrimack. Subsequent experiments have shown the opinion to be correct.

CHAPTER XXX.

THE NAVY OF THE WEST AND OUR INLAND WATERS IN ITS RELATIONS TO OUR NAVAL POWER AND THE FUTURE POLICY OF OUR COUNTRY.

As has been previously stated, there was not a gun belonging to the United States on the Mississippi or its tributaries at the beginning of the war; and before the close there were a hundred steamers fully armed upon these waters, and these, with a few exceptions, were built there. This presents an entirely new feature in the history of the progress of the nation, and one whose bearing upon our future demands our earnest attention. It shows what unlimited, and before unthought-of, resources that "Great West" contains both for the defence of the country and for the increase of our national power. We had before considered with pride and hope its boundless grain-fields, its capacity for the support of hundreds of millions of people, its vast manufacturing power, and its mineral wealth; but it had not occurred perhaps to any that its power to create and maintain a navy might rival that of the States that lie on the seaboard. The bearing which this will have upon our not remote future cannot be measured now, but a few suggestions may partially indicate its importance.

One conclusion has been already reached by the American people, and that is, that no European power shall interfere with the affairs of this continent, much less shall any be permitted to establish and maintain a monarchy upon our borders. That conclusion will be enforced, if need be, by the whole power of the nation. Another thought is fast assuming a fixed and definite character in the American mind, and that is, that our Government must and will control this North American Conti-

nent from the Isthmus to the Poles, and from ocean to ocean. Toward this, as the territorial goal of our national career, all controlling influences and all leading events irresistibly tend. It is one of those popular impulses which no objections weaken and no difficulties will check. It is useless to speculate upon the morality of the measures which may be adopted for the acquisition of territory, for we know not now what their character may be. If wrong is done to any people, then we may be certain that it will be avenged by a just God, the King of nations, who is bound to defend the weak and break the oppressor's power. But the rebellion has taught us a lesson in regard to the danger of hostile neighbors that will not be, and ought not to be, forgotten.

The imminent peril in which we were placed by the French occupation of Mexico compels the nation to inquire how such a danger can be best averted in the future; the harboring and encouraging of the conspirators in Canada, and the fitting out of expeditions from thence to poison, rob, and burn, raises necessarily the question whether our national safety does not demand an effectual safeguard; while the closing of the Mississippi by the rebels has caused our people of the Northwest to consider whether the great Lakes shall be permitted to float a hostile navy which might threaten and perhaps destroy all the beautiful cities that adorn the American coast of our Mediterranean Seas, and put in peril or sweep away the immense commerce which has been created there by American enterprise and capital. Those who expect that England or France, or any other power of Western Europe, will prove more friendly to us in the future than they have been in the past, will perceive their error the moment either one of them believes that we can be safely attacked. It needed only the evidence afforded us during the rebellion to convince us that this is true, and no present professions of friendship will throw the American people off their guard, or induce them to neglect any proper means of defence.

The control of the waters of this continent, of the St. Lawrence and the Lakes, as well as the Mississippi and the seaboard, is a necessity of our national existence, and, as certainly as the nation remains undivided and unchecked, no long time can

elapse before its flag will cover and protect all. This is no threat against any, nor is it a boast of national power or a puff of vanity. It is a simple statement of the not remote result of the natural growth of the nation, the inevitable effect of adequate causes already in operation.

It is not in the nature of things that a power which has manifested toward us the spirit which England showed during the rebellion, which sent her fleets of smugglers from Nassau, and her raiders, her poisoners, and her incendiaries from Canada, should long be permitted to hold possession of any part of these inland seas and mighty rivers. Our people will not consent that our national safety should thus be perilled. They will at no remote period become the exclusive property of the American Union.

In view of what was done on the Mississippi and its tributaries during the rebellion, we can easily see that, if the St. Lawrence and the Lakes were exclusively ours, and the Lakes and the Mississippi were suitably connected, the power of the West to create and maintain a navy would exceed that of our seaboard. The whole chain of waters from the mouth of the St. Lawrence to the mouth of the Mississippi might be fitted, not alone with river steamers, but with ocean cruisers also that no power of earth could even approach. In a very short time the West, if need be, will be able to construct and hold in these secure harbors a thousand ships, which she could send forth at her pleasure through the great gate of the North, or that of the South, or withdraw them from the seas, keep them secure in her far-away inland fastnesses, while land and floating batteries, obstructions, and torpedoes, could so seal up the Mississippi and St. Lawrence, that they could not be entered, or if that were possible for any foe, he would enter only to encounter a force superior to his own. The Western waters are likely to become hereafter the great naval depot of the nation, and the time may not be far distant when the destruction of all the ship-yards of the seaboard, were that possible, would not seriously cripple the naval power of the United States. When once the Lakes and the St. Lawrence are all American, and the inland seas are properly connected both with the Mississippi and the North Atlantic, a navy, limited only by the producing power of the

country, can be created and maintained on waters inaccessible to any hostile nation. This is one of the important facts which the war has brought to light, and it is one to which the statesmen of the country will be compelled to give earnest attention. Should it be possible for the nations of Western Europe to combine and harass our seaboard, the Great West, if cherished and developed by a wise and liberal policy, will have the means both to defend and avenge the nation.

CHAPTER XXXI.

THE MISSISSIPPI SQUADRON.

THE facts thus far presented exhibit in general terms the nature of the preparations which were made by the Navy Department for carrying on the war upon the Atlantic coast. It was called upon to provide for the recovery of the forts and harbors which the rebels had seized ; to establish and maintain an effective blockade along thirty-five hundred miles of coast, a large portion of which coast has also an interior line requiring to be guarded ; to prevent the egress of rebel cruisers, and especially of such iron-clads as the Merrimack ; to provide the means for the supply of the Army along all its extended lines of communication ; to keep the Potomac open, and to protect the seaboard cities. Nor must it be forgotten that all this was to be done under the continual menace of a foreign war. This task, however, great as it was, is only a part of the work which almost from the first was laid upon the Secretary.

An interior department of naval operations was forced upon the attention of the Department in the early stages of the rebellion, and it was soon seen that it was scarcely less important or less difficult to control than that of the ocean and the coast. It was seen that there must be a navy of the rivers as well as for the sea ; and such was the extent of navigation on these internal waters that it required a very large and very powerful squadron to make any serious impression upon the lines of the enemy, or to maintain the communications of the Army as it advanced into the enemy's country. The magnitude of the demand made upon the Department from this quarter may be better understood by considering the position then held by the

rebel armies. Their northern battle-line in the West stretched along the southern bank of the Ohio to near its mouth, and south of that they held the rivers and the country to the Gulf by fortifications or batteries at every strategic point. Kentucky proposed to hold herself neutral and indifferent between the Government which had fostered and protected her and the rebels who had conspired for its overthrow; yet on her soil, unhindered and unmolested, these conspirators had seized Columbus, on the Mississippi, a short distance below the mouth of the Ohio, and had converted it into a strongly fortified position. Farther down, in Tennessee, at Island No. 10, where a bend in the river gave great facilities for the work, batteries were constructed so powerful that no craft then on the Western waters could pass them. Still below this point Fort Pillow guarded the river at Memphis; then at Vicksburg was the river Gibraltar; and beyond were the formidable batteries at Grand Gulf; and then Port Hudson and Baton Rouge. All these were to be approached from above, if at all, unless the forts below New Orleans could be captured, and this was not done until most of the work had been finished on the river above. In addition to these strongholds, Fort Henry guarded the Tennessee, and Fort Donelson the Cumberland; and these were the only channels by which an army advancing into Tennessee could be supplied, for the railway line that ran from the Ohio to Nashville was not safe for an hour even in *neutral* Kentucky after our Army held the country below, while at first it was in the hands of the rebels from Lexington, south, and was frequently, by the *neutral* friends of the conspirators, between Lexington and Cincinnati. Besides this, the rebels, when they closed the upper Mississippi by their batteries, seized all the boats that were below and strengthened and armed them; so that, in addition to their land fortifications, they had from the first a really formidable fleet.

The main features of the rebel plan of war in the West were, to seize and hold Missouri, and, as a consequence, Kansas and Nebraska, and thus threaten or invade the free States of the Northwest from that point; to hold Kentucky and Tennessee, and, if possible, cross the Ohio, and make the Northern States the theatre of the war; or, in case they should be unable to

invade the North, to maintain their battle-line unbroken along the Ohio and through Missouri; to keep the great rivers closed; and thus holding back the North, and secure within their own territory, compel at length the recognition of their independence. They presented certainly to the North a most formidable front, a line of defences which was indeed impregnable to any means of assault which the Government at first possessed. No army could be moved into Tennessee by land alone, because the line of communication with a Northern base could not be held secure, and a defeat far from the Ohio would be the destruction of an army, and open the road for an invasion of Illinois, Indiana, and Ohio, and the destruction of their cities.

It was quite evident that no impression could be made upon the power of the rebellion in the West, until a firm foothold could be gained in Kentucky and Tennessee, and until the Mississippi could be wrested from the conspirators' control. It was clear that the whole seaboard might be regained, even to Florida, and yet the rebellion remain as dangerous as ever, if the rebels could hold the Mississippi River and the valley up to or near the Ohio.

France was looking with eager eyes toward Texas, in the hope of securing and extending her Mexican usurpation. England was ready to give all the assistance in her power to any step which would weaken the North; and had the rebels been pressed back from the seaports and the Northern Atlantic slope, they would have had it in their power, if still holding the Mississippi, the Southwest, including Tennessee, and the great natural fortresses of the mountains, to have so connected themselves with Mexico and France as to have caused the most serious embarrassment. It became absolutely necessary to the success of the Government that the rebels' northern line of defences should be broken through, and that the Mississippi should be opened to its mouth.

At first, and before the nature of the work was fully understood, the whole was placed under the direction of the War Department, as it was thought the few armed transports which would be needed would be a mere appendage of the Army. The idea of a formidable river navy of a hundred powerful steamers did not, in the beginning, enter into the minds of any.

It was soon seen, however, that an entirely new description

of craft was needed for this work. It was clear that the river boats, which had been built for the common purposes of freight and passage, were not capable of resisting the fire of heavy artillery, and that the batteries of the rebels could not be captured nor even passed by them. They could not even be safely employed alone in the transport of troops, for they could be sunk or crippled by the field batteries that could be moved from point to point. The question of iron-clads was proposed, but with only the ocean iron-clads as a guide, who should conceive the proper form of an armored boat which could navigate our rivers, and compete successfully with the heavy guns, rifled as well as smooth-bore, of the fortifications? It was by no means easy to solve this problem, but it was absolutely necessary that the attempt should be made.

The first movement of the Government had a double purpose. It was to throw a body of troops into Middle Tennessee by the Cumberland and Tennessee Rivers, in order to gain a permanent position within the rebel lines, and at the same time to turn by this operation the fortifications at Columbus on the Mississippi. But both the Cumberland and the Tennessee were as has been stated, strongly guarded by forts, and these forts could only be reduced by the aid of gunboats, and these were almost literally to be created. Fortunately for the Government, a gentleman was found whose genius, energy, and resources were equal to the exigency, as the following statement of facts will very clearly show.

On the 17th of April, three days after the surrender of Fort Sumter, Attorney-General Bates wrote to James B. Eads, of St. Louis, as follows: "Be not surprised if you are called here suddenly by telegram. If called, come instantly. In a certain contingency it will be necessary to have the aid of the most thorough knowledge of our Western rivers, and the use of steam on them, and in that event I have advised that you should be consulted."

This fact shows how early the Government was considering the question of the best method of occupying and defending our Western waters.

As the gentleman above mentioned, Mr. Eads, was so intimately connected with the operations of the Government on the



Eng^d by A.H. Ketchum

Jas. B. Eads



Western waters, and as so much was due to his energy and fertility of resource, it is believed that the reader will be interested in knowing something of his early career, for he too is one who, through the cherishing influence of our free institutions, has risen from the ranks of the laborers—the people.*

* JAMES B. EADS was born in 1820, in Lawrenceburg, Indiana. He very early evinced such a love of machinery as attracted the special notice of his friends. When only eight years old, he watched with the greatest interest all the machinery to which he had access. When nine years old, the family removed to Louisville. The engine on board the steamboat excited in the boy so much admiration and wonder, that the engineer was induced to explain to him the operation of the principal parts of the machine. So well did the lad profit by this one lesson in steam engineering, that a little more than two years after, he constructed a miniature engine which was worked by steam. When about eleven years old, his father fitted him a small workshop, and there he constructed models of saw-mills, fire-engines, steamboats, and electrotyping machines. One of the pastimes of his childhood was, to take in pieces and put together again the family clock, and at twelve years he was able to do this with a patent lever watch with no tool but his pocket knife. At the age of thirteen, misfortune having overtaken his father, he was thrown upon the world with none but God to help him. He was landed at St. Louis, barefooted, and without a coat to cover him. There he had no resource but to undertake the selling of apples in the streets of St. Louis, and this for a time he bravely did in order to obtain bread for himself, and to aid in supporting his mother and his sisters. Having obtained soon after a situation in a mercantile house, with which he remained several years, and having free access during that time to the excellent library of the senior partner, he used the opportunity to study mechanics, machinery, and civil engineering. He next passed some time as an officer on one of the Mississippi steamboats, and there obtained that knowledge of the great river which prepared him for the important services which were afterward performed.

In 1842 he formed a copartnership with Case & Nelson, boat-builders, for the purpose of recovering steamboats and their cargoes which had been sunk or wrecked in the river. This plan succeeded so well that the operations of the company extended ere long from the Balize to Galena, and over into the tributaries of the Mississippi. In 1845, having sold out his interest in this company, he started a factory for the making of glassware, and this was the first experiment of the kind west of the Mississippi. In 1847 he returned to his old business of recovering boats and property wrecked in the river. In this new company they began with about fifteen hundred dollars. Ten years from that time the business had been so successful, that the property of the firm was valued at nearly half a million dollars. In the winter of 1855-'56, Mr. Eads made a formal proposition to Congress to keep open for a term of years the Western rivers, by removing all obstructions and keeping the channel free. A bill was reported, and defeated by Jeff. Davis and J. P. Benjamin. On account of ill-health, Mr. Eads retired from business in 1857, having prepared himself, however, by a life of activity, energy, and success, for the more important part which he was destined to take in the affairs of the country in the construction of the Western iron-clads.

The dispatch before mentioned came soon after the letter, and Mr. Eads repaired to Washington. The Attorney-General explained to him at length his views in regard to the occupation of Cairo, and the placing of gunboats on the Mississippi. Through the Attorney-General he was introduced to the members of the Cabinet, and the plan of operations on the Western rivers was considered. Secretary Cameron seemed to think that the idea of Judge Bates in regard to gunboats for the rivers was useless or impracticable, and manifested no interest whatever in the plan. The Secretary of the Navy, however, considered the subject to be one of great importance, and requested Mr. Eads to prepare a written statement of his own views, and embodying the general plan of Judge Bates. This was accordingly done on the 29th of April. The paper contained proposals for placing gunboats on the rivers, suggestions as to the kind of boats best fitted for the service, and also in regard to batteries to be erected at several points.

This paper was referred to Commodore Paulding, who, after hearing Mr. Eads's explanation of the plan, reported at once in favor of its adoption. Upon receiving this report, the Secretary of the Navy detailed an officer to accompany Mr. Eads West to purchase and fit out the necessary vessels. Up to this point the Secretary of the Navy was obliged to act almost alone in the matter—the Secretary of War, Mr. Cameron, to say the least, appearing wholly indifferent. The officer selected for this service was Captain John Rodgers, but at the next Cabinet meeting the War Department claimed jurisdiction over the whole movement. After some vexatious delay, arising apparently from the little interest which was felt by the War Department in the matter, an order was obtained from Mr. Cameron, directing Captain Rodgers and Mr. Eads to proceed with the purchase of the vessels. The project was submitted to General McClellan, then just appointed to his Western command, and being by him approved, active operations were commenced. They found at Cairo one of the former snag-boat fleet, called the Benton. It was believed that her strong hull was well calculated for the service proposed, and that, with certain alterations suggested by Mr. Eads, who formerly had owned the boat, she could be fitted to bear the heavy armament which was required.

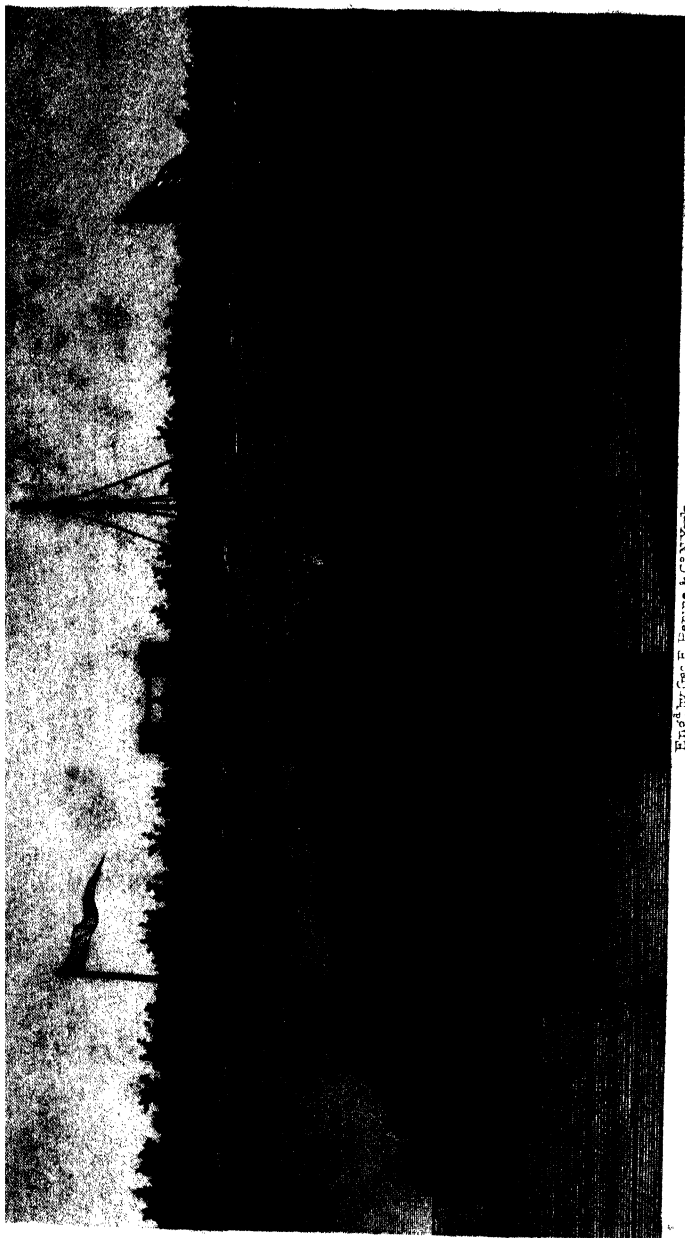
A plan of alterations, including a sloping iron-clad casemate, was presented to Captain Rodgers. That officer, however, did not approve it. Mr. Eads then proposed instead, that they should purchase some of the strong and swift boats used on the Missouri River, and have them altered at St. Louis, to avoid the uncertain navigation of the Ohio. Captain Rodgers, however, did not approve of this plan, and proceeded up the Ohio to Cincinnati, and there altered the *Conestoga*, *Tyler*, and *Lexington*, and armed them as gunboats. This was during the latter part of May and in June. Sometime in July they were started down the river, but were detained for six or seven weeks on the bars of the Ohio, on account of the low water, and did not arrive at Cairo until near the 1st of September, 1861. These vessels were not plated with iron. The boilers and machinery were partially protected with coal-bunkers, and they had oak bulwarks of sufficient thickness to prevent the penetration of musket-balls. They had side-wheels, and were originally used for freight and passengers on the Ohio River. On their arrival at Cairo the *Tyler* was found to be so badly injured by the sand-bars that she had to be placed on the marine ways for repairs.

During the month of July, 1861, the Quartermaster-General advertised for proposals to construct a number of iron-clad gunboats for service on the Mississippi River. The bids were opened on the 5th of August, and Mr. Eads was found to be the best bidder for the whole number, both in regard to the time of completion and price. The Department decided to construct seven of these vessels, each of about six hundred tons, to draw six feet, to carry thirteen heavy guns, to be plated with iron two and half inches thick, and to steam nine miles per hour. They were one hundred and seventy-five feet long, and fifty-one and a half feet wide; the hulls of wood; their sides placed out from the bottom of the boat to the water-line at an angle of about thirty-five degrees, and from the water-line the sides fell back at about the same angle to form a slanting casemate, the gun-deck being but a foot above water. This slanting casemate extended across the hull, near the bow and stern, forming a quadrilateral gun-deck. Three 9 or 10-inch guns were placed in the bow, four similar ones on each side, and two

smaller ones astern. The casemate enclosed the wheel, which was placed in a recess at the stern of the vessel. The plating was two and a half inches thick, thirteen inches wide, and was rabbeted on the edges to make a more perfect joint.

On the 7th of August, 1861, Mr. Eads signed a contract with Quartermaster-General Meigs to construct these seven vessels ready for their crews and armaments in sixty-five days. At this early period the people in the border States, especially in the slave States, had not yet learned to accommodate themselves to a state of war. The pursuits of peace were interrupted; but the energy and enterprise which was to provide the vast material required for an energetic prosecution of the war had not then been aroused. None could foresee the result, and a spirit of doubt and distrust pervaded financial and commercial circles. It was at this time that the contractor returned to St. Louis with an obligation to perform what, under ordinary circumstances, would have been deemed by most men an impossibility. Rolling-mills, machine-shops, founderies, forges, and saw-mills were all idle. The demands of peace had ceased for months before, and the working-men were enlisting, or seeking in States more quiet their accustomed employment. The engines that were to drive this our first iron-clad fleet were yet to be built. The timber to form their hulls was uncut in the forest, and the huge rollers and machinery that were to form their iron armor were not yet constructed. The rapidity with which all these various parts were to be supplied forbade depending alone on any two or three establishments in the country, no matter how great were their resources.

The signatures were scarcely dry upon this important contract before persons in different parts of the country were employed upon the work through telegraphic orders issued from Washington. Special agents were dispatched in every direction, and saw-mills were simultaneously occupied in cutting the timber required in the construction of the vessels in Kentucky, Tennessee, Illinois, Indiana, Ohio, Minnesota, and Missouri; and railroads, steamboats, and barges were engaged for its immediate transportation. Nearly all of the largest machine-shops and founderies in St. Louis, and many small ones, were at once set at work day and night, and the telegraph lines



LAUNCHED OCT. 12TH 1861.
ARMAMENT 3 CANNONS

Eng'd by Geo E. Fernald & Co N York

ST LOUIS CREATION DE KALIB.

CONSTRUCTED BY
JAMES B LEAS

THE FIRST - S. RONCLAD



between St. Louis and Pittsburg and Cincinnati were occupied frequently for hours in transmitting instructions to similar establishments in those cities for the construction of the twenty-one steam-engines and the five-and-thirty steam-boilers that were to propel the fleet. The large rolling-mills of Gaylord, Son & Co., at Portsmouth, Ohio; those of Swift & Co., at Newport, Kentucky; and of Harrison, Chouteau & Valle, at St. Louis, were all employed in rolling the armor-plates. Mr. Thomas G. Gaylord, of Cincinnati, undertook to furnish this important material, and his promptness and energy greatly contributed to the rapid progress of the work. To him justly belongs the credit of rolling the first iron plating used in the war. Within two weeks not less than four thousand men were engaged in the various details of its construction. Neither the sanctity of the Sabbath nor the darkness of night were permitted to interrupt it. The workmen on the hulls were promised a handsome bonus in money for each one who stood steadfastly at the work until it was completed, and many thousands of dollars were thus gratuitously paid by Mr. Eads when it was finished. On the 12th of October, 1861, the first United States iron-clad, with her boilers and engines on board, was launched in Carondelet, Missouri, in forty-five days from the laying of her keel. She was named the *St. Louis*, by Rear-Admiral Foote, in honor of the city. When the fleet was transferred from the War Department to the Navy, this name was changed to *Baron de Kalb*, there being at that time a vessel commissioned in the Navy called the *St. Louis*. In ten days after the *De Kalb*, the *Carondelet* was launched, and the *Cincinnati*, *Louisville*, *Mound City*, *Cairo*, and *Pittsburg* followed in rapid succession. An eighth vessel, larger, more powerful and superior in every respect, was also undertaken before the hulls of the first seven had fairly assumed shape.

Major-General Fremont, about the 1st of September, ordered the purchase of the wrecking boat *Submarine No. 7* (the vessel Captain Rodgers had been urged to obtain three months before), and sent her to the establishment of Mr. Eads, with instructions to convert her as speedily as possible into an iron-clad gunboat. She was immediately docked and the work pushed on her with the same degree of celerity as upon the

others. The name under which she was known as a snag-boat (*Benton*) was restored to her by Admiral Foote. In 1862 Admirals Foote and Davis pronounced her the best iron-clad afloat, and the reports of Admiral Porter also testify to her excellence. Thus one individual put in construction and pushed to completion within one hundred days a powerful squadron of eight steamers, aggregating five thousand tons, capable of steaming at nine knots per hour, each heavily armored, fully equipped, and all ready for their armament of one hundred and seven large guns. The fact that such a work was done is • nobler praise than any that can be bestowed by words.

It is to be regretted, however, that the promptness and energy of the man who thus created an iron-clad navy on the • Mississippi was not met on the part of the Government with an equal degree of faithfulness in performing its part of the contract. On one pretext or another the stipulated payments for the work were delayed by the War Department until the default assumed such magnitude that nothing but the assistance rendered by patriotic and confiding friends enabled the contractor, after exhausting his own ample means, to complete the fleet. Besides the honorable reputation which flows from success in such a work, he has the satisfaction of reflecting that it was with vessels, at the time his own property, that the brilliant capture of Fort Henry was accomplished, and the conquest of Donelson and Island No. 10 achieved.

The ever-memorable midnight passage of No. 10 by the Pittsburg and Carondelet, which compelled the surrender of that powerful stronghold, was performed by vessels furnished four or five months previous by the same contractor, and at the time unpaid for.

In April, 1862, designs were solicited by the Navy Department from Mr. Eads for the construction of light-draught armored vessels for service on the Western waters. Plans were accordingly submitted for vessels of five and a half feet draught, with fixed casemates. The Department insisted on vessels with rotating turrets and of lighter draught. Plans were then produced for vessels of four and a half feet, with a turret eight inches thick. Still lighter ones were demanded, when he submitted others for vessels to draw but three and a half feet, with

a rotating turret six inches thick. The plans of these vessels contemplated turrets of Mr. Eads's own invention, and differing entirely from those of Ericsson and Coles. The guns were designed to be placed on a movable platform, supported upon a piston moving in a central vertical cylinder. By the action of steam in this cylinder the platform was elevated or lowered. The guns were to be loaded in the hold of the vessel, and instantly raised by the steam to the level of the embrasures. These were but little larger than the muzzles of the guns, and, by a simple contrivance controlling the breech of the guns, the muzzles were kept in constant range with the embrasures, so that depressing the platform gave elevation to the guns, while raising it lessened the elevation, and, when continued, caused the aim of the guns to be depressed. By this means an elevation of twenty-one degrees and a depression of five degrees was obtained through port-holes barely larger than the muzzles of the guns. The guns had each a horizontal steam cylinder placed between the gun-slides which ran them into battery and held them there until fired, when the force of the recoil was absorbed by their pistons (the rods of which were attached to the gun-carriages) compressing the steam in the cylinders until the guns came to rest, at which moment the steam was allowed to escape. The ports were also opened by steam, and closed at the instant of recoil. The walls of the turret were supported upon small iron spheres rolling in a circular base on the bottom of the vessel. The vertical central cylinder, the recoil cylinders, and the two small engines to rotate the turret, were all within the turret, below the level of the deck, and all revolved with the turret. Steam was supplied and exhausted through a central steam-joint at the bottom of the turret. Although Mr. Eads offered to guarantee the performance of this turret to the complete satisfaction of the Department, he was not permitted to put them on these vessels—the reason given being that the Ericsson turret had been tried one month before in the contest with the Merrimack, and was a success. These vessels were much needed, and a possibility of failure in the turret, which would involve several months' delay in replacing it with one of Ericsson's, could not be risked at that time. The plans of the light-draught vessels before mentioned were accepted, and Mr.

Eads was authorized to construct two of them, the Osage and Neosho. Their hulls were to be of iron. The deck-plating was to be three-quarters of an inch, and the side-plating two and a half inches. The paddle-wheels were protected by iron two inches thick. Although Mr. Eads was not permitted to put his turrets on them, he was allowed to modify the form of Mr. Ericsson's, with a view to obtaining the least possible weight. This he did by lessening the height of it from nine to seven feet, making the turret six inches thick, and bending the turret floor-beams to allow the guns to be worked at a lower level, thus requiring less height of turret. When launched with their weights all on board, it was found that the vessels would be really lighter than the contract called for, and that they could carry an extra half inch of armor all over their decks. This was ordered to be put on them, and, when they were completed and ready for action, they drew less than four feet.

The Osage was sunk by a torpedo in Mobile Bay, after having gallantly led the van of Porter's Red River expedition both going and returning. She was afterward raised. In May of 1862 the Navy Department solicited plans for four iron-clads, iron-hull propellers, to carry two turrets each of eight inches thickness, four 11-inch guns, and three-quarters inch deck-armor, and to steam nine nautical miles per hour, with capacity of three days' coal, and not to exceed six feet draught of water. Mr. Eads's plans were accepted for these vessels, and he was immediately authorized to construct the four, to wit, the Winnebago, Milwaukee, Chickasaw, and Kickapoo. So well were his designs matured, that these vessels were also, like the Osage and Neosho, found to be of less draught than the contract stipulation, and the Department ordered an extra coating of armor three-quarters of an inch thick over the entire decks of the four vessels. Three of them were also officially reported to exceed the contract speed, and the other to be fully equal to its requirements.

In addition to the fourteen heavily-armed gunboats thus constructed, he converted during the time seven transports into what were called *tin-clads* or musket-proof gunboats, and four heavy mortar-boats were built by him during the same period. Thus was commenced the squadron on the Western waters

which became afterward such an important and even indispensable arm of defensive and offensive operations. Without it the rebellion could not have been overcome, for the Mississippi could not have been opened, and the lines of the rebels could not have been broken through. Others shared nobly in the subsequent work, but Mr. Eads was the efficient and successful pioneer, and by him, almost unaided, the Government was enabled to put the first fleet of iron-clads on the Mississippi and its tributaries. Such men deserve a place in history by the side of those who fought our battles.

CHAPTER XXXII.

BEGINNING OF ACTIVE OPERATIONS ON THE WESTERN RIVERS.

As it has been previously stated, Captain Rodgers, who had been sent West in the latter part of the spring of 1861 to purchase and prepare gunboats for the rivers, procured and altered three boats at Cincinnati—the Lexington, the Conestoga, and the Tyler. Owing to low water these boats did not reach the Mississippi till about the 1st of September. One was injured, so as to need repairs, in her passage down the Ohio, but the other two were at once engaged in active service.

Before any important movements were made on the rivers, Captain Rodgers returned East, and Commodore A. H. Foote assumed the command of the Western flotilla. The appointment of this officer to that post was considered by those who knew him a sufficient guaranty of success. No one probably in the Navy enjoyed more of the affectionate confidence of the Government and of the country, so far as he was known, than Commodore Foote. To all the qualities that belong to the officer and gentleman, he added those of the devoted Christian, and he knew how to obtain success, not alone by the arts and weapons of war, but by asking it directly from Christ.

It was well for our country that we had so many, both in the Navy and Army, who were accustomed to seek daily an audience with the Lord. No one began the war more brilliantly than the lamented Foote. He struck at Fort Henry, the first important blow upon the rebel lines in the West, and gained the first of those victories which gave to us the heart of the rebellion. He did this, however, at the expense of a wound, which withdrew him from active service, and was probably the

cause of his death. The following order shows the date of his appointment to service in the West:

NAVY DEPARTMENT, WASHINGTON, 30th August, 1861.

SIR: You have been selected to take command of the naval operations upon the Western waters, now organizing under the direction of the War Department.

You will, therefore, proceed to St. Louis, Missouri, with all practical dispatch, and place yourself in communication with Major-General J. C. Fremont, United States Army, who commands the Army of the West. You will coöperate fully and freely with him as to your movements.

Requisitions must be made upon the War Department through General Fremont, and whatever the Army cannot furnish, the Navy will endeavor to supply, having due regard to its operations on the coast.

The Western movement is of the greatest importance, and the Department assigns you this duty, having full confidence in your zeal, fidelity, and judgment.

I am, respectfully,

GIDEON WELLES, *Secretary of the Navy.*

Captain ANDREW H. FOOTE, *U. S. Navy, Washington, D. C.*

When this officer arrived at St. Louis, and on the 6th of September, 1861, assumed command of the Western flotilla, the forces consisted of three wooden vessels in commission, which had been purchased, equipped, and armed as gunboats by Commander John Rodgers, and there were nine iron-clad gunboats and thirty-eight mortar-boats in course of construction. In his report for 1862 the Secretary of the Navy thus speaks of this river service: "The service was anomalous in its character, and there was with many great incredulity as to the utility and practicability of gunboats in carrying on hostilities on the rivers where it was believed batteries on the banks could prevent their passage. There were also embarrassments for want of funds and of material for naval purposes, there being no navy-yard or naval depot on the Western waters. All these difficulties were met and surmounted by the energetic and efficient officer to whom the duty was intrusted, whose perseverance and courage in overcoming the obstacles that impeded and retarded his operations in creating a river navy were scarcely

surpassed by the heroic qualities displayed in subsequent well-fought actions on the decks of the gunboats he had under so many discouragements prepared."

The country has fully indorsed the graceful compliment here paid to Commodore Foote, and no officer of whom the war deprived us was more widely and deeply lamented. The estimation in which he was held by the Government was subsequently shown, when, after the failure of Du Pont, he was selected to direct the operations against Charleston. All expected that the rebel stronghold would yield to his skill and energy, when death put an end to his labors and the country's hopes.

The first service in which the gunboats were engaged were merely reconnoitring expeditions, and were important mainly, because they showed the capabilities of this novel war-vessel, and gave the officers an opportunity of testing the power and range of their guns. The rebel batteries at Columbus, only a few miles below Cairo, were of a very formidable character; they had field batteries of rifled cannon and some heavy guns in battery at different points on the Missouri side of the river, and one or more gunboats were sheltered under the guns of the fortifications at Columbus. From Cairo to the Balize the rebels held by strong works and gunboats the entire control of the Mississippi and its tributaries. Of course, our little fleet of gunboats at the mouth of the Ohio could make no movement without being liable to an attack either from the shore or from the flotilla of the rebels.

Early in September, General Grant, then in command of the troops at and about Cairo, determined to make an expedition against a body of rebels at Norfolk, a town in Missouri, eight miles below Cairo. The flotilla was at that time under the direction of the War Department, and the two gunboats Lexington and Conestoga were ordered to go down and support the troops. The Conestoga went down as far as Lucas Bend, the point above Columbus, without discovering any enemy. There, however, the rebels had gathered in force. They had, it appeared, sixteen pieces of field artillery, several of which were rifled, and one heavy piece in battery. With these was a body of cavalry, that assisted in transporting the guns from point to point along the bank. The shot and shells from the rifled cannon ranged

to and beyond the gunboat, striking all around her, but doing her no damage. The difficulty of striking a moving mark at long range was very apparent, as was also the superiority of the gunboats to a land force operating upon the shore without the shelter of fortifications. The shells from the heavy guns of the boats, bursting in the midst of or near the cavalry, threw them into confusion, and for the same reason their field batteries would soon be silenced, and they would be compelled to move to some other point, only, however, to be followed by the gunboats and be scattered again. The batteries finally retreated, and were apparently taken across the river to Columbus by a steamboat in waiting, where our gunboats could not reach them, because of the Columbus forts. In the course of the afternoon the rebel gunboat *Yankee* came up from Columbus and opened fire upon the *Conestoga* and *Lexington* at long range. The first shot from the *Conestoga* struck the *Yankee* on the ricochet, bounding from the water close by her side, and she immediately started down-stream. Before she was entirely out of range, and when at the estimated distance of two miles and a half, the *Lexington* fired a shell from an 8-inch gun, which struck the *Yankee* on the starboard wheel-house, and there exploded, seriously crippling her, so that she could use but one engine in getting under the cover of the Columbus batteries.

While our gunboats were retiring from this fight, the *Conestoga* encountered what, through the whole war, was the chief peril of these river skirmishes, a fire from an ambush on shore. Only one man, however, was seriously wounded. In such a fight these concealed enemies had of course an important advantage. Crouched like savages close to the ground in the thickets, or the long grass of the banks, they were able to take deliberate aim at any man exposed on the boat, while the return fire was necessarily very much at random, and the shot in most cases passed over the ambushed foe. Several skirmishes of this kind were had on the different rivers, with no very important results, except that the crews of the gunboats learned how to handle with skill and effect the vessels and their armament, so that what was at first scoffed at, became daily more and more a terror to the rebels.

The first opportunity which the new flotilla had of winning a marked success was at the battle of Belmont. The expedition which brought on this conflict was undertaken by General Grant to surprise, if possible, and capture or disperse a body of men, of about seven thousand, that occupied the little village of Belmont, opposite Columbus, and thus prevent General Polk from sending reinforcements into Missouri. This was in November, 1861. The Union troops, consisting of five skeleton regiments of Western men, numbering in all less than three thousand, were embarked on transports at Cairo, and were convoyed down the river by the gunboats Tyler and Lexington. The troops were landed some two miles above Belmont; and then the gunboats, in order to cover the movement and mislead the enemy, dropped down within range of the batteries at Columbus, and opened fire upon them, occupying their attention while the troops were advancing. These batteries, however, after a short practice, succeeded in getting the exact range of the boats with their heavy rifles, one of which was a 94-pounder. They were obliged to haul off, as they were not prepared to make a serious attack. In the mean time the Union forces had met and gallantly driven back the rebels toward their camp; but there they had secured themselves by a broad line of fallen trees, in which, and behind which, they were posted.

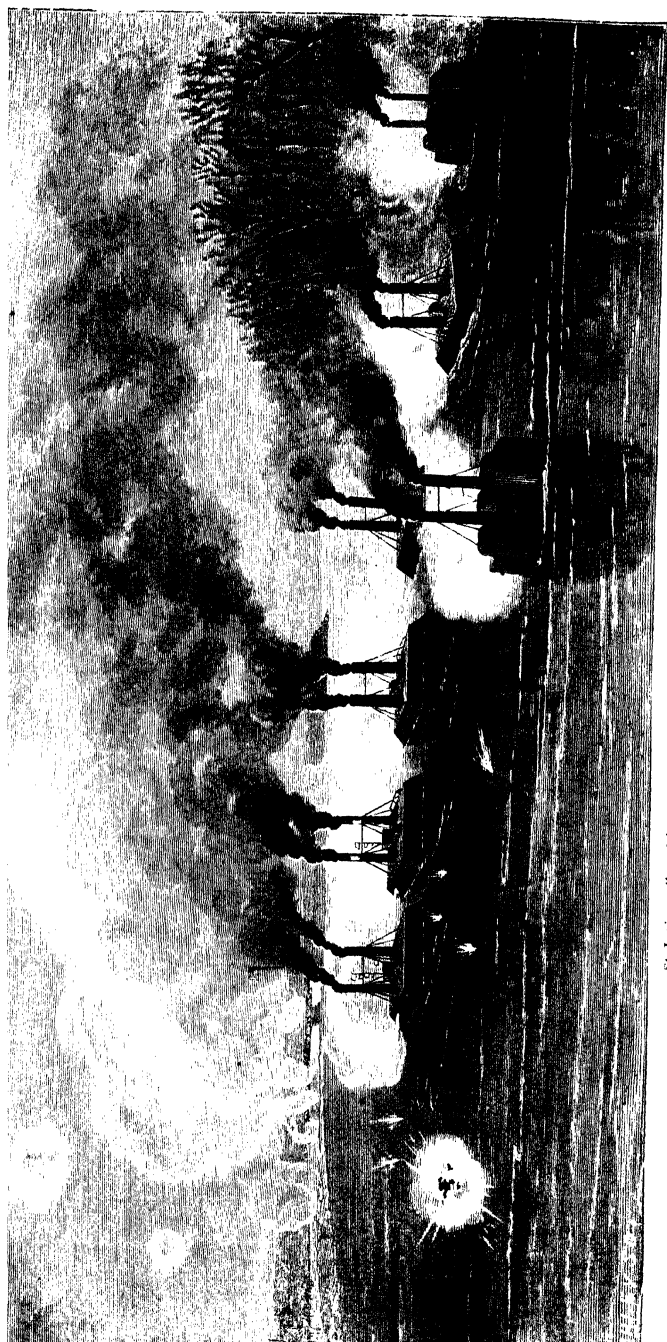
There the fight was nearly hand to hand, and stubbornly contested on both sides; gradually, however, the rebel line was forced backward, pushed from tree to tree, until they finally broke and fled in all directions, and the field and their camp were completely won. So soon, however, as it was discovered at Columbus that their camp was captured, the guns of their batteries were trained upon it, and as they completely commanded the spot, it was evident that a speedy retreat must be made. Nor was there any reason for delay, for the object of the expedition was gained: the enemy were dispersed, and their camp, stores, and artillery had been captured. But the men were elated with victory, and leaving their ranks to secure the spoils, were scattered so much that they could not at once be recalled and re-formed. In the mean time the rebel commanders on the opposite shore, perceiving the state of things, hastily collected six regiments of their best troops and

sent them over to cut off the retreat to the boats of our scattered men. In this they nearly succeeded. But although they threw themselves in part between the Union soldiers and the boats, our men were collected and re-formed in season to commence an orderly march, and they literally cut their way through the rebels to the transports. Here the gunboats came in with much-needed and most effective aid. With their heavy guns they threw shot and shell into the dense masses of the enemy with deadly effect, throwing them into confusion, and preventing them from using with success their superior numbers. When the troops reached the transports the rebels were in close pursuit, and pressed up within a short distance both with musketry and artillery. Here they first learned the real terrors of this novel craft. The Lexington and Tyler dropped down, so as to leave the transports outside of their line of fire, and then poured a perfect storm of death into the rebel masses. Guns, carriages, horses, and men were scattered and hurled into the air by the explosion of their heavy shells, and whole ranks were mowed down at a broadside; and it was most conclusively proved that it is sheer madness for any body of men, however numerous, to attack these gunboats with musketry and field artillery. It is only to rush on slaughter. These fearful shells, if they explode over a body of men, send down a fiery hail of bullets and broken iron; and if one strikes a mass of soldiers, it cuts its way through like a solid shot, and then exploding, sweeps down all within its reach.

As a means of covering troops marching within range of their guns, or of repelling an attack upon any point which their shells could reach, the value of the gunboats was very clearly shown, and the rebel authorities became more anxious in regard to the issue when they understood the power of this new weapon of river warfare.

The terrible havoc which these boats are capable of making may be learned from the fact that, in a little more than half an hour, as was reported, the Lexington and Tyler threw more than a hundred rounds of shot and shell into those masses of rebels. They fought desperately with their new enemy, forming only to be scattered, maimed, or killed, by the deadly missiles, and putting their artillery in position only to see their pieces cap-

sized or thrown into the air by the shells. Covered thus by the gunboats, the army transports returned to Cairo. It was a bloody fight on both sides, the loss of the rebels being greatest, because of their exposure to the fire of the boats. An opportunity was soon to be given to try the power of the river fleet against the heavy armament of forts.



St. Louis. Cincinnati. Lexington. Charleston.
BATTLE OF FORT HENRY, FEBRUARY 4, 1862.

CHAPTER XXXIII.

CAPTURE OF FORT HENRY.—EXPEDITION UP THE TENNESSEE.

THE three strong points in the northern rebel line of defence between the Mississippi and the Cumberland Mountains were—Bowling Green, to prevent an advance by the line of the railways from Cincinnati to Chattanooga; Forts Henry and Donelson, on the Cumberland and Tennessee, to close these rivers against the passage of an army into Tennessee by transports; and Columbus, strongly fortified, to command the Mississippi. How to break through this line of defence was the problem to be solved, and one for which a solution was to be found before any effectual movement could be made from the Ohio southward. It was quite evident that no overland expedition against Bowling Green could be made, for the line of communication with the base at Cincinnati would be no more safe in neutral Kentucky than in any openly hostile State. The height of the river bluffs at Columbus forbade the hope of any successful attack from the river, and General Grant had not the troops to cope with the twenty thousand men said to be stationed there under General Polk.

The only plan by which success seemed even possible, was to attack the central stronghold at Forts Henry and Donelson. If these could be gained, Columbus and Bowling Green would both be turned and necessarily evacuated.

This latter course was determined upon, and early in January, 1862, the preparations were being made. The plan embraced a united attack by land and from the river. Commodore Foote was to ascend the Cumberland with his flotilla, and Gen-

eral Grant was to coöperate by a land force from Cairo. As this was the first serious trial of the gunboats, and particularly of the iron-clads constructed by Mr. Eads, it will be interesting to know the character and armament of these floating batteries. The flotilla consisted of four iron-clad and three wooden vessels, carrying in all seventy-five guns, as follows: Essex (iron-clad), 9 guns, Commander D. D. Porter; St. Louis (iron-clad), 13 guns, Lieutenant Leonard Paulding; Cincinnati (iron-clad), 13 guns, Commander R. N. Stembel; Carondelet (iron-clad), 13 guns, Commander Henry Walke; Conestoga (wooden), 9 guns, Lieutenant Phelps; Tyler (wooden), 9 guns, Lieutenant W. Gwin; Lexington (wooden), 9 guns.

This statement of the armament of these boats must be received only as approximating correctness, as it is not taken from an official report. The guns on board our vessels were so frequently changed during the war that it is somewhat difficult to determine what the precise battery was at a specified time, unless the commanding officer made a special report. Some of these gunboats carried 9-inch smooth-bore guns, and 100-pounder rifles; and it is easy to see, therefore, that they were very formidable vessels. The Essex mounted a 10-inch columbiad, with which she often, it was said, threw shells from Lucas Bend into the streets of Columbus.

When the preparations were nearly complete for this expedition, General Grant ordered a reconnoissance in force in the direction of Columbus. This force is reported to have consisted of some fifteen regiments of infantry, several batteries of artillery, and a few companies of cavalry. No serious attack was meditated, but the movement was probably intended to mislead both the commander at Columbus as well as those at Forts Henry and Donelson.

At the same time with the march toward Columbus, Brigadier-General C. F. Smith, with six thousand men, made a reconnoissance by a march overland to Fort Henry, and, having made satisfactory observations, returned to Paducah. The intention of this movement does not appear, unless it was to induce the rebels to believe that all idea of attacking the fort had been abandoned. However this may have been, the attack when made seems to have been entirely unexpected.

The expedition left Cairo on the 3d of February, and proceeded on that day only as far as Paducah. Proceeding up the river the next day, the troops were landed a few miles from the fort, with the intention of having them occupy certain points to prevent reinforcements, and, if possible, a retreat of the garrison. General Grant and staff then went on board the *Essex*, and, accompanied by the *St. Louis* and the *Cincinnati*, moved up the river to reconnoitre the fort. This resulted in quite a spirited skirmish, in which the *Essex* was struck by a rifled shot, which went through the private stateroom of Captain Porter. Beyond this no damage was done to the gunboats.

Before describing the battle of the next day it may be well to give the reader an idea of Fort Henry. It is situated on the Tennessee, on the river bottom, and is near the northern boundary of Tennessee. During high water it is surrounded, or nearly so, by the river, and can thus be approached only by a causeway. It is a regularly constructed work, having nine bastions, and its armament at the time of its capture was seventeen guns. One was a 10-inch columbiad (120-pounder), one 24-pounder rifle, twelve 32-pounders, one 24-pounder siege-gun, and two 12-pounders. It had accommodations for a large number of men, but how large the garrison was at the time of the attack is not known. A large body of troops were said to have been encamped outside of the main works, who, during the attack, retreated to Fort Donelson, leaving only men enough behind to work the guns. A portion of the garrison also left on a steamboat. The fort stood at the end of a straight reach in the river of two miles in length, and of course commanded the stream for that distance. A battery of two 64-pounders on a neighboring eminence commanded the works, which, detached as it was, might easily have been stormed by our troops and used to destroy the works it was intended to defend.

Wednesday night was one of great discomfort to the troops on shore. A heavy thunder-storm swept over the river and roared among the hills, drenching the camps, putting out the cheerful fires, and chilling all with the piercing dampness of a mountain-rain. The soldiers were willing to believe that the flash and roar of the tempest over Fort Henry, where the centre

of the storm seemed to be, were prophetic of coming wrath for the rebels and their cause.

The morning of Thursday was dark and threatening, but ere the fleet was ready to move the sun came out brightly and warm, and the discomforts of the night were forgotten in the bustle of preparation and anticipation of the battle. About 10 o'clock the fleet got under way, the four iron-clads leading and moving abreast up the stream—the Conestoga, Lexington, and Tyler following about one mile in the rear and also moving abreast. Immediately upon passing the lower end of Panther Island the fort was in range, but few shots were fired on either side for some minutes after. The boats moved on till within a mile of the works, with only occasional firing. Thus they went on till only a third of a mile lay between them, and the guns, the gunners, and even the shells piled near were all clearly seen. The fort was waiting for the attack; but the bow guns of the boats were all ready, and when at a distance of six hundred yards the flag-ship delivered her fire, followed in the same instant by all the bow guns of her three consorts. Before the echo of their roar had died away, ten guns from the fort replied with an accuracy of aim that proved the value of the gunboats' iron mail. The three wooden boats in the rear then added their fire, and the action was fairly and fully begun. The firing on both sides, owing to the short range, was exceedingly accurate. The iron-clads were repeatedly struck, but in no case, as was said, was the plating penetrated. The damage done was by shells and balls that entered the ports or went through the unprotected parts of the boats. The fire of the gunboats was so severe that a part of the guns of the fort were silenced. One of the most efficient guns of the rebels, a 24-pound rifle, burst at the sixth round, stunning and disabling all about it. The 10-inch columbiad was so filled with mud by the bursting of a shell as to be useless; and then two of their 32-pounders were disabled by shot or shell, and thus their power of defence was seriously impaired quite early in the action. The little garrison fought bravely, but the commanding officer, Brigadier-General Tilghman, soon saw that prolonged resistance would only cause a useless slaughter. One-third or more of his small company were killed or wounded in an hour,

the inside of his works in ruins, and his best guns disabled, while only one of the gunboats had been injured. He therefore very properly struck his flag after a battle of little more than an hour. The gunboats were struck in many places, and their unprotected upper works much cut up; but the only serious injury was on board the *Essex*, and it was caused by a single shot. It entered a larboard port and took off the head of young Brittan, master's mate, who was standing by the side of Captain Porter, who thus had one of the narrow escapes of a battle. The shot then entered the boiler, and spread instant death and terror through the ship. Twenty men and officers were killed or scalded by this explosion. Among the wounded, was Captain Porter himself. The men in the pilot-house were suffocated, there being no way of egress except by the passage from below, up which the hot steam was rushing. The *Essex* was of course rendered unmanageable by this fatal shot, and drifted down the stream till taken in tow by another boat. One brave fellow, so terribly scalded that he knew he must soon die, inquired how the fight was going, and being told of victory, shouted "Glory to God!" and died. Such incidents show how the whole soul is absorbed in the terrible excitement of a battle, excluding for a time every thought of self, so that a man stepping off into eternity forgets the awfulness of death in his anxiety for victory.

Thus the first serious battle of our iron-clads against land-batteries, protected by regular works, ended in complete success. Their light armor would have been no protection against the artillery afterward encountered by the *Monitors*, but was a good defence against such guns as were then mostly found in the rebel works of the West. The 10-inch solid shot, or that of their heaviest rifles, would probably have broken it through had it been fairly struck; but such risks it was found could be very properly taken, and from that hour it was seen that the fortifications of the rivers, where they could be reached at short range by the guns of our iron-clads, would not be an insuperable obstacle to the progress of our armies. To Commodore Foote belongs the praise of first solving this problem, and of forcing open the first gateway through which our army could enter the South. When Fort Donelson was soon after captured the

northern line of the rebels was broken, never to be re-formed. The permanent occupation of the South was begun, and this occupation was rendered possible by the iron-clad navy of the Western rivers. For although the gunboats could have effected a prominent lodgment without the Army, neither could the Army have advanced without the Navy. The work of both was bravely and successfully done.

Soon after the surrender of Fort Henry, Commodore Foote sent an expedition of three gunboats up the Tennessee River, under the command of Lieutenant S. L. Phelps. These boats were the *Conestoga*, Lieutenant Phelps; the *Taylor*, Lieutenant Gwin; and the *Lexington*, Lieutenant Shirk. This expedition left Fort Henry on the 6th of February, and reached the bridge of the Memphis and Louisville Railroad in the evening. The draw was closed, and the machinery for opening it was destroyed. Above the bridge, several steamers were seen escaping up the stream. A party was landed, and after an hour's labor they succeeded in forcing open the draw. The *Conestoga* and *Lexington* immediately started in chase of the fleeing boats, some of which, it was known, were loaded with military stores. After a five hours' run a portion of the rebel fleet was overhauled. Two of them loaded with stores were fired, and they soon exploded, and with such force as to break the skylights and slightly damage the woodwork of the *Conestoga* at the distance of a thousand yards.

On the evening of the 7th they reached Cerro Gordo, in Hardin County, Tennessee, where was a very fine steamer, the *Eastport*, being converted into an iron-plated gunboat. She was two hundred and eighty feet long, in fine condition, about half finished, and large quantities of excellent lumber and iron were ready for the completion of the work. These, with the boat, a very valuable prize, were secured.

At Chickasaw, Mississippi, two steamers were found and seized, one of which was loaded with iron for Richmond. From this point the fleet proceeded to Florence, in Alabama, at the foot of Muscle Shoals. Three steamers were found here, which the rebels fired on the approach of the boats. A portion of the cargoes of these boats was saved. They were loaded with stores either for or from Fort Henry. The result of this

expedition was the capture of three steamers, including the rebel gunboat, and the burning of six others, with the loss of their valuable cargoes.

During the progress of this expedition so large an amount of Union sentiment was exhibited as greatly to encourage the officers in command. They were often told, "Send us a small organized force, and arms, and we will put down this rebellion among us ourselves." What became of this Union sentiment afterward is a question of much interest. It certainly seemed to have disappeared in the progress of the war.

The fall of Fort Henry, and the possible loss of Fort Donelson, seem to have determined the rebels at once upon that new plan of defence, in which one culminating point was the fierce battle of Pittsburg Landing. It was merely the removal of their main line farther South. Columbus and Bowling Green were to be evacuated, and then the line reestablished with Island No. 10, Fort Pillow and Memphis fortified on the Mississippi, a point on the Tennessee at or near Pittsburg was to be fortified, and Chattanooga made a stronghold on the east, making of it a gate to close up Eastern Tennessee, and also to prevent a southern march of our army. Pittsburg was to be made a more central position, not only to check Halleck and Grant, but, if possible, it was to be made the starting-point for an invasion of the States north of the Ohio. The first movement in this plan was to occupy Pittsburg with a considerable force, and to commence the establishment of batteries there, in anticipation of a concentration of troops at or near that point. This was begun about the time of the fall of Fort Donelson. Lieutenant Gwin, commanding the gunboat Taylor, having learned that the rebels were thus employed, left Savannah, where he was then lying, nine miles below Pittsburg, and with the Lexington, Lieutenant Shirk commanding, proceeded up the river. Upon reaching Pittsburg they encountered a force, which, as was afterward learned, consisted of one thousand infantry, four hundred cavalry, and six pieces of artillery, some 32-pounders, and some rifled. This force opened fire upon the gunboats at the distance of twelve hundred yards. When within a thousand yards the gunboats returned the fire, and soon silenced the batteries. They then moved up abreast of the place, and under

cover of grape and canister, four armed boats landed, with a portion of two companies, sharpshooters, in addition to the crew.

The object of the landing was to destroy a house near the batteries, and to learn the real strength and purpose of the enemy. This small force actually drove the rebels back, and held them in check until their work was done. They were of course under the guns of the boats, but, except in landing and in covering the retreat, these could not be used without destroying our own men. Heavy volleys of musketry were poured into the boats, and they were riddled with balls wherever they could penetrate. The fight was short and severe, as will be seen by the amount of ammunition expended by the two gunboats: one hundred and sixty-five shells, forty-six stand of grape, and sixty-seven rounds of shrapnel and grape from the howitzers. The loss of the rebels in this engagement was said to be twenty killed and one hundred wounded. Our own reported loss was only eleven killed and wounded. It was ascertained that the rebels had begun extensive works, and the operation shows the important work which was continually done by these gunboats on the Western rivers. After this they did not renew the attempt to fortify at Pittsburg, but concentrated their troops at Corinth, where the gunboats could not reach them. In the mean time the river fleet was engaged in conveying troops from point to point, protecting them against ambushes and shore batteries, thus making it possible to gather the army that won the great battle of Pittsburg Landing.

Some of the operations of the Western fleet between the battle of Belmont and the movement upon Fort Henry, as well as the difficulties experienced by Commodore Foote, are worthy of note before proceeding to the more important features of the war.

On the 7th of January, 1862, Commodore Foote, with the *Essex*, Captain Porter; the *Lexington*, Lieutenant Shirk; and the *Taylor*, Captain Walke, made a reconnoissance down the river toward Columbus. In regard to this the Commodore wrote as follows:

I ran down within range of the rebel batteries, but the enemy did not open fire. My object was fully attained in seeing the river down to

the point we reached clear of submarine batteries and other obstacles. I did not consider it policy to open fire on the batteries, as we had not the force to attempt to carry them, which would have induced the rebels to claim a victory, if we had retired after first opening upon them. One of their gunboats, which we had driven down the river, followed us upon our return. I fired at her and then gave chase, compelling her to return to Columbus, after an exchange of two or three shots, one of which was fired from the Columbus batteries. The object of the reconnoissance was satisfactorily accomplished in all respects, showing that the rumors of obstacles being in the river and dangerous torpedoes, are unfounded, at least, until within range of the rebel batteries.

The commanding officer found great difficulty in procuring men to man his river fleet, as well as in collecting naval stores so far inland, and where they had not been needed before. Under date of the 12th of January, 1862, he wrote as follows to the Navy Department :

As we are getting stores, etc., aboard the remaining gunboats, preparatory to putting them in commission, I necessarily spend all my time in looking after these boats, which is not required in looking after our interests down the river. We are now in immediate want of a thousand men for the gunboats. In the mean time, I am getting the boats into the middle of the river, and putting their ordnance and other equipments and stores on board, and by the 20th instant expect to have all the gunboats in commission, although with but one-third of a crew to each boat.

On the 11th of January, the day previous to the date of the above letter, a skirmish was had with the rebel gunboats which came up from Columbus. An account of this little action, written by Captain W. D. Porter, commanding the Essex, is minute and official, and is as follows :

U. S. GUNBOAT ESSEX, FORT JEFFERSON, *January 13, 1862.*

SIR : On the morning of the 11th General McClelland sent on board this vessel and informed me that the enemy were moving up the river from Columbus with several vessels, towing up a battery. I immediately signalled Lieutenant Commanding Paulding, of the St. Louis, to get under way and prepare for action. A very thick fog coming on, we were compelled to steam slowly down the river, but about 10 o'clock, or a

little after, it rose, and showed us a large steamer at the head of Lucas's Bend. We heard her whistle the moment we were seen by them. Shortly after whistling she was joined by another large and a small steamer. We pursued our course steadily down the river, and when within long range the large steamer fired a heavy shell-gun, which struck the sand-bar between us, and ricocheted within about two hundred yards of this vessel, and burst. We at this time did not return the fire, but continued our course down in order to near the vessel. By this time the large steamer was joined by her consorts, and they opened a brisk fire upon us. I now hailed Lieutenant Commanding Paulding, and directed him to try one of his rifle-cannon. He instantly fired, and sent his shot completely over the enemy. I then opened from my bow guns, and the action became brisk on both sides for about twenty minutes, the enemy firing by broadsides. At the end of this time the enemy hauled off, and stood down the river, rounding to occasionally and giving us broadsides. This running fight continued until he reached the shelter of his batteries on the Iron Banks above Columbus. We continued the action and drove him behind their batteries in a crippled condition, as we could distinctly see our shell explode on his decks. The action lasted over an hour, and terminated, as I think, in a complete defeat of the enemy's boats, superior in size and number of guns to the Essex and St. Louis. On the 12th General McClelland requested me to make a reconnoissance toward the Iron Banks. I did so, and offered the enemy battle by firing a round shot at their battery; but they did not respond, nor did I see any thing of their boats. I have since been informed through the general that the boats of the enemy were completely disabled, and the panic became so great at the Iron Banks, that the gunners deserted their guns.

The fire of the St. Louis was precise, and the shot told well. The officers and men of this vessel behaved with firmness—Mr. Riley, our first master, carrying out all my orders strictly, while the officers of the gun divisions, Messrs. Laning and Ferry, paid particular attention to the pointing of their respective guns. Mr. Brittan, my aide, paid all attention to my orders, and conveyed them correctly and with alacrity. In fact, all the officers and men on board behaved like veterans.

I have the honor to be, etc.,

W. D. PORTER, *Commander.*

Flag-Officer A. H. FOOTE.

The following letter from Commodore Foote, written from Paducah, gives an account of the condition of affairs when the expedition moved up the Tennessee against Fort Henry. His

Christian character shines out even in his official papers. He has "every confidence," he says, "under God," that he shall silence the guns of Fort Henry. He recognizes a Power above greater than powder and shot and shell :

U. S. GUNBOAT TAYLOR, PADUCAH, *February 8, 1862.*

SIR : I have the honor to inform you that I left Cairo yesterday with this vessel, having ordered the armored gunboats Essex, Carondelet, Cincinnati, and St. Louis, to precede me to Paducah, and arrived here last evening.

To-day I purpose ascending the Tennessee River with the four new armored boats and the old gunboats Taylor, Conestoga, and Lexington, in convoy of the troops under General Grant, for the purpose of conjointly attacking and occupying Fort Henry and the railroad bridge connecting Bowling Green with Columbus. The transports have not yet arrived, although expected last night from Cairo, which causes detention : while in the mean time, unfortunately, the river is falling. I am ready with the seven gunboats to act offensively whenever the army is in condition to advance, and have every confidence, under God, that we shall be able to silence the guns at Fort Henry and its surroundings, notwithstanding I have been obliged, for want of men, to take from the five boats remaining at Cairo all the men, except a sufficient number to man one gunboat for the protection of that important post.

I have left Commander Kilty as senior officer in charge of the guns and mortar-boats at Cairo, ordering him, with the assistance of Fleet-Captain Pennock, to use every effort in obtaining more men and forwarding the early equipment of the mortar-boats. It is peculiarly unfortunate that we have not been able to obtain men for the flotilla, as they only are wanting to enable me to have at this moment eleven full-manned, instead of seven partially-manned gunboats ready for efficient operations at any point. The volunteers from the army to go in the gunboats exceed the number of men required ; but the derangement of companies and regiments, in permitting them to leave, is the reason assigned for not more than fifty of the number having been thus far transferred to the flotilla.

I enclose a copy of my orders to the commanders of the gunboats, in anticipation of the attack on Fort Henry ; also, a copy of orders to Lieutenant Commanding Phelps, who will have more especial charge of the old gunboats, and operate in a less exposed condition than the armored boats.

I have the honor to be, etc.,

A. H. FOOTE, *Flag-Officer.*

Hon. GIDEON WELLES, *Secretary of the Navy, Washington, D. C.*

P. S.—Several transports with troops have just arrived. I proceed up the Tennessee early in the morning, and will there make the Cincinnati my flag-ship.

A. H. F.

The following special order, issued before moving up the river to attack the fort, shows how carefully this experienced officer had considered the probable circumstances of the fight; and that while he put his trust in God, he also recognized the necessity of the careful and skilful use of all means at human disposal. He neglected nothing which, in his estimation, could secure success.

SPECIAL ORDER.

U. S. GUNBOAT TAYLOR, OHIO RIVER, *February 2, 1862.*

The captains of the gunboats, before going into action, will always see that the hoods covering the gratings of the hatches at the bows, and sterns, and elsewhere, are taken off; otherwise great injury will result from the concussion of the guns in firing. The anchors, also, must be unstocked, if they interfere with the range of the bow guns.

In attacking the fort, the first order of steaming will be observed, as, by the vessels being parallel, they will be much less exposed to the enemy's range than if not in a parallel line, and by moving ahead or astern, which all the vessels will do by following the motions of the flag-ship, it will be difficult for the enemy to get an accurate range of the gunboats.

Equal distances from one another must be observed by all the vessels in action. The flag-ship will, of course, open the fire first, and then others will follow when good sight of the enemy's guns in the fort can be obtained. There must be no firing until correct sights can be obtained, as this would not only be throwing away ammunition, but it would encourage the enemy to see us firing wildly and harmlessly at the fort. The captains will enforce upon their men the absolute necessity of observing this order; and let it be also distinctly impressed on the mind of every man firing a gun, that, while the first shot may be either of too much elevation or too little, there is no excuse for a second wild fire, as the first will indicate the inaccuracy of the aim of the gun, which must be elevated, or depressed, or trained, as circumstances require. Let it be reiterated that random firing is not a mere waste of ammunition, but, what is far worse, it encourages the enemy when he sees shot and shell falling harmlessly about and beyond him.

The great object is to dismount the guns in the fort by the accuracy of our fire, although a shell in the mean time may occasionally be

thrown in among a body of the enemy's troops. Great caution will be observed lest our own troops be mistaken for the enemy.

When the flag-ship ceases firing, it will be a signal for the other vessels also to cease, as the ceasing of fire will indicate the surrender, or the readiness to surrender, the fort. As the vessels will all be so near one another, verbal communication will be held with the commander-in-chief when it is wanted. The commander-in-chief has every confidence in the spirit and valor of officers and men under his command, and his only solicitude arises lest the firing should be too rapid for precision, and that coolness and order, so essential to complete success, should not be observed ; and hence he has, in this general order, expressed his views, which must be observed by all under his command.

A. H. FOOTE,

Flag-Officer commanding Naval Forces on Western Waters.

CHAPTER XXXIV.

CAPTURE OF FORT DONELSON.

At a point opposite Fort Henry the Cumberland approaches within twelve miles of the Tennessee, and there the rebels had constructed Fort Donelson, a much larger and stronger work than Henry, and armed with heavier guns. It was garrisoned by from fifteen thousand to twenty thousand men, under the command of Generals Pillow and Buckner. The fort is on the left bank of the river, about one hundred miles from its mouth. It was resolved to follow up the capture of Fort Henry with a joint attack by land and water on this more important work. In a military point of view, the possession of the Cumberland was more important than that of the Tennessee. Extensive iron-works were located upon its banks; it is navigable at times for large boats some four hundred miles, and for half that distance boats have sufficient water all the year. The country which it drains is capable of furnishing a large amount of supplies, for which the river affords the means of transport, while at Nashville very large factories were employed in preparing supplies for the rebel army. Besides, no advance could be made into Tennessee with this fort and its strong garrison behind. The land forces, eighteen thousand strong, were moved across from Fort Henry, over almost impassable roads, on the 12th of February. These troops reached the enemy's lines on that day, and, driving in his pickets, proceeded to invest the fort.

The gunboat Carondelet (iron-clad) had been sent forward ahead of the rest of the flotilla, and on the 13th was ordered to attack the water batteries single-handed. In order that the

reader may know what work this was for such a steamer, a brief statement is given of the character of the works. The fort is situated on a sloping bluff which rises about one hundred and fifty feet above the river. According to the report of Commodore Foote, it mounted twenty guns, which were disposed as follows: one battery, about twenty feet above the water, of 32-pounder and 64-pounder guns; the second, with a similar armament, sixty feet higher up; and the third, on the summit of the hill, mounting 128-pounder guns; while the garrison, all but those who manned the guns, were over the crest of the hill, and occupying outworks beyond the effectual reach of shot or shell except from mortars. It is very easily seen that it would be utterly vain for a single steamer, and she able to use only her bow guns, to attack such a position as that with any hope of doing serious injury, or of escape without damage to herself. She fired one hundred and thirty-eight shots when a 128-pound ball entered one of her ports and injured her machinery, compelling her to withdraw. Having repaired damages she made another attack in the afternoon of the same day, but without effect on the works. Both parties now prepared for what was expected to be the decisive battle of the next day.

On the 14th six gunboats were ordered to attack the fort; four of these were iron-clads, and two were wooden ones. They got under way at 2 o'clock in the afternoon, and proceeded toward the works four abreast, or as nearly so as the narrow stream would permit. The rebels opened fire from the battery of heavy guns on the top of the hill at 2½ p. m., but the boats moved steadily without reply, intending to come at once to close action. The gunboats opened fire at the distance of a mile, but did not diminish their speed till within four hundred yards of the lower battery. At this point the firing on both sides was very rapid and unusually destructive. Shot and shell from the fleet plunged point-blank into the lower batteries of the fort, dismounting their guns and driving the gunners away, while heavy shot and shell came not singly, but in volleys against the sides and upon the decks of the gunboats. Several entered their ports, and some of the 128-pound shot broke through the iron armor. Many were killed and wounded on board the steamers, but their fighting power was not sensibly

diminished, and the rebel batteries evidently began to fail. Several of their guns were dismounted, and they were driven out of the lower battery ; and the action was evidently going against them, when three of the gunboats were almost at once disabled by shots that struck the steering apparatus and a wheel-house. These were of course compelled to drift out of action, and as it was impossible for the remaining vessels to carry the action to any successful result, they also withdrew.

The gunboats fought with twelve guns against twenty in battery, and planted upon ground far above the level of their decks, the highest battery mounting 128-pounders, which could send upon them a plunging fire, with almost entire safety to themselves. The result of the action showed that the light armor of the gunboats could be pierced by the shot of the heavy guns, and that the machinery and steering apparatus needed additional protection. Still, the great importance of the iron armor was fully shown, for the *St. Louis* was struck fifty-nine times, with only one man killed and nine wounded ; and the *Pittsburg* was hit forty times, and only two men were wounded ; and on board the whole fleet only eleven were killed and forty-three wounded, a small number considering the severity of the action. Nothing important seems to have been accomplished by this attack ; and although it was thought that but for the disabling of the steering gear the batteries would have been silenced in a few minutes, it is not very clear how this would have been decisive when twenty thousand men were within the works ready to man the guns again ; and when, though the river batteries had been destroyed, the works beyond still remained to be carried by assault, as they actually were at the close of the fight, when the fort was so gallantly won.

It may be, however, that too little consideration is thus given to the moral effect of the fire of the gunboats upon the garrison in diminishing their confidence in their defences, for they found themselves unable to stand to their guns, and their river batteries were being effectually silenced by the dismounting of the cannon ; and they had good reason to dread the effect of the shells when the gunboats should take a position where they could command the camp. Such seems to have been the opinion of the Secretary of the Navy, who, in direct

communication with Commodore Foote, had the best possible means of knowing the truth. The following passage is found in the Report of 1862 in regard to this point: "The rebels were so greatly demoralized that they could not be brought into effective action on the following day, which resulted in the defeat of the insurgents and the surrender of Fort Donelson to the army the next morning."

Justice to Commodore Foote and to the officers and men of the fleet requires that the following statement in regard to the disadvantages under which the action was fought should be given to the public. On the 11th of February he wrote as follows to the Secretary:

I leave again to-night with the Louisville, Pittsburg, and St. Louis, for the Cumberland River, to coöperate with the army in the attack on Fort Donelson. I go reluctantly, as we are very short of men, and transferring men from vessel to vessel, as we have to do, is having a very demoralizing effect upon them. Twenty-eight ran off to-day, hearing that they were to be sent out of their vessels. I do hope that the six hundred men will be sent immediately. I shall do all in my power to render the gunboats effective in the fight, although they are not properly manned; but I must go, as General Halleck wishes it. If we could wait ten days, and *I had the men*, I would go with eight mortar-boats and six armored boats.

Instead of the armament which he thought necessary for the reduction of the fort, he had only the four iron-clads which could be brought into close action, and they imperfectly manned. These facts place the action of the gunboats with Fort Donelson in a new light, and the wonder is, not that they did not capture the fort, but that they were not themselves destroyed.

The capture of their central strongholds on the Cumberland and Tennessee, and of the surrender and dispersing of their army of twenty thousand men, fifteen thousand of whom were made prisoners at Donelson, created a panic among the rebels, which made Commodore Foote very anxious to proceed at once to Nashville before the enemy could recover from these severe blows. He pressed upon General Grant an immediate pursuit with at least four thousand men. General Halleck, however,

for reasons which do not appear, prohibited the gunboats from proceeding above Clarksville. Inasmuch as Nashville, a most important depot and centre of operations for the rebels, was entirely at our mercy, it does not appear why the river fleet was not permitted to ascend and occupy the place. Whatever may have been the reason, the gunboats were held back, with an open river before them, and on the 27th of February the army, with two gunboats only with it, took possession of Nashville.

By these brilliant operations of the Army and Navy, the rebel line of defence was broken at the centre, and this made it a necessity for them to abandon the two wings of this line—Bowling Green on their right, and Columbus on the Mississippi. It was one of the great hinge-points of the war, the first *great blow* which the rebellion received. A firm lodgment in the heart of Tennessee involved, almost of necessity, the final overthrow of the rebel cause. The naval battles which had been fought on the Atlantic coast were perhaps more brilliant; but none, unless it was that between the Monitor and the Merrimack, were followed by more important results.

After he had taken possession of Clarksville, Commodore Foote, not having obtained the consent of General Halleck to proceed to Nashville, returned to Cairo and prepared for operations on the Mississippi. On the 23d of February he moved toward Columbus for the purpose of a reconnoissance with four iron-clads, two mortar-boats, and three transports, carrying one thousand men. This expedition was to meet a flag of truce from General Polk, to which Commodore Foote promised to reply.

On the 2d of March he once more moved down the river in force to receive a flag of truce from General Polk. The rebels probably availed themselves of this method of ascertaining the force which our commanders had at their disposal. Commodore Foote was quite willing to gratify them in this particular, and with good reason; for on seeing the number of the boats and transports, they at once began the evacuation of the northernmost of their fortified forts on the Mississippi.

The rebels were soon seen burning their winter quarters, and other large fires indicated the destruction of their stores. The heavy guns on the bluffs were removed, but those in the water batteries were left. The works at Columbus were very formi-

dable, consisting of tiers of batteries on the land side, and they were surrounded by a ditch and abatis. Here also an immense chain had been prepared to throw across the river, and a large number of torpedoes were found. Great quantities of shot, shell, and anchors were also secured.

General Sherman and Lieutenant Phelps, with six gunboats, four mortar-boats, and three transports, with two regiments and two battalions of infantry, went down and landed, but found that the place was already occupied by some four hundred of the Second Illinois cavalry, who, being out on a scouting party, had dashed into the place. General Cullom, who, with General Sherman, was in command of the troops that came down the river, discovered on landing a train of fire leading to a magazine, which he cut in season to save the lives of the soldiers.

The nobleness of Commodore Foote's character was ever seen in the very warm commendation with which he mentioned in his dispatches every officer whom he thought deserving. He was a warm admirer of General Cullom, of General Halleck's staff, and in the dispatch announcing the fall of Columbus he took especial pains to commend to the Secretary Commanders Dove, Walke, and Stembel, and Lieutenants Paulding, Thompson, Shirk, Phelps, and Sanford. He had before bestowed very emphatic praise upon Lieutenant Phelps for the manner in which he conducted the expedition to Florence after the fall of Fort Henry.

CHAPTER XXXV.

OPERATIONS AGAINST AND CAPTURE OF ISLAND NUMBER TEN.

AFTER the centre of the rebel line had been broken by the capture of Forts Henry and Donelson, and these victories had been followed by the occupation of Nashville and the evacuation of Bowling Green on their right wing, and Columbus on the Mississippi, it was decided to move down that river with a more formidable force than had yet been organized, and attempt to remove the various obstructions, forts, and batteries with which the rebels had blockaded the stream. The first of these were the very formidable works at Island No. 10, a spot admirably fitted for blockading the river, and which it was by no means easy to attack either by land or water. This island is at the bottom of a long bend in the river some forty miles from Columbus. The fortifications on the island and on the opposite shores mounted seventy heavy guns, and there was also a floating battery with some sixteen guns. In addition to these, field-batteries were established at intervals for ten or twelve miles where they could command the channel. The river from this island runs for several miles northwest, and then turns west and south. At the top of this bend and north of the island is New Madrid, which the rebels had fortified and occupied with several thousand troops to prevent the works on the island from being approached by land from the Missouri side. Below New Madrid they had also batteries on the west side to prevent that shore being occupied; and on the east side, to prevent troops from crossing and attacking the island from the Tennessee shore. A few miles below New Madrid large swamps occupy both sides of the Mississippi, so that a force es-

caping from the island would have to land above these swamps at Tiptonville in order to reach the interior. Above this, on the Tennessee shore, it is swampy, and in most places overflowed, so as to prevent the rebels from leaving in that direction by land.

While, therefore, our gunboats held the river above, if New Madrid could be occupied by our land forces, and these batteries be placed along the river below, to the edge of the great swamp that could command the stream, the garrison of the island would be hemmed in, though it could not thus be captured until the supplies should fail. The somewhat difficult task of occupying New Madrid was committed to General Pope, who had under his command some twenty thousand men. The peril of this enterprise was greatly increased by the presence below the island of the rebel gunboats, and by the stage of the water in the river. The stream was so high as to raise the guns of the boats above the banks; and as the country around New Madrid is flat, they commanded it to the extreme range of their cannon, some of which were rifles.

General Pope, in meeting these difficulties, showed both energy and fertility of resource. He established in the night sunken batteries, on which the guns were only high enough to fire over the surface of the ground, so that it was nearly impossible for the gunboats to strike them or get a shell into the trenches, while, as they were within rifle shot of the point from which the boats usually attacked, many of their men were shot down at the guns. Owing to peculiar circumstances, it was one of the few cases where the gunboats of the rivers fought at disadvantage with troops on shore. Nine of these boats at some times engaged the batteries, but with little effect, because their shot and shells went mostly over the trenches, while they, lying high out of water, and above the banks, were conspicuous marks, and therefore suffered severely.

On the 14th of March, General Pope having nearly silenced the rebel batteries on shore, they retreated to their boats, and our troops took possession of the place. By extending his batteries to the south, he gained command of the river below the island, and at the same time shut up a part of the rebel fleet above him, for these wooden boats could not, without great

peril, pass his heavy siege-guns. Thus, when Commodore Foote moved down from Columbus, Island No. 10 might be said to be invested, the swamps on two sides serving instead of lines of troops. To attack these batteries of the island from above was a work of immense peril. The current of the river is swift, and the most heavily armored boats of Commodore Foote's fleet were very deficient in steam-power. Under the most favorable circumstances they could barely stem the stream, making but little progress, and, of course, should one of them meet with any accident depriving her of even a part of her motive power, she would at once drift helplessly under the enemy's guns. To fight with only the forward guns, bow on and down-stream, required great caution. It was for this reason that the gunboats could not be brought into close action, as was the case at Forts Henry and Donelson. The experience there was an admonition not to be disregarded. Had they been fighting down-stream then, all their disabled boats would have been captured or destroyed, for they would have been carried in a few minutes directly under the guns of the water batteries. Commodore Foote was compelled, therefore, to fight at long range, not approaching nearer than one mile and a half or two miles. He expected much from his mortar-boats, but although they compelled the enemy to move his encampments out of range, the separate forts and batteries were a small mark for shell practice at a distance of two miles. There was yet another weighty reason why it was very important to be careful of the gunboats. The rebels had a fleet on the river below, outnumbering our own, and the Louisiana, soon after destroyed below New Orleans, was expected daily to come up the river; and should our fleet be weakened materially, there was nothing to prevent the flotilla of the enemy from reaching the cities of the Mississippi and Ohio, for no batteries had yet been finished above, by which they could have been stopped. It was necessary, therefore, for Commodore Foote to exercise the greatest vigilance and caution. During this time, also, he was suffering greatly from the wound received at Donelson.

On the 14th of March, 1862, the fleet which the commodore had prepared, consisting of seven iron-clads and ten mortar-boats left Cairo, and having been joined at Columbus on the

same day by twelve hundred troops, under Colonel Buford, reached Hickman the same evening. Here the Louisville was found partially disabled by the leaking of her boilers, and was sent back to Columbus for repairs. On the 15th, at daylight, the fleet moved on, and arrived in the vicinity of Island No. 10 at nine o'clock in the morning. The fog on the river was so dense as to hide all objects at a little distance, and a heavy rain was also falling. Nothing could be done that day except to get two of the mortar-boats in a position where they could try the range. On the morning of the 16th the mortar-boats were placed in as good a position as possible, and they were soon enabled to shell several regiments out of their encampments. At this extreme range, they could just reach the batteries on the island, the floating batteries, and those on the Tennessee shore. These mortar-boats were under the charge of Captain Maynardin, United States Army, as ordnance officer, assisted by Lieutenant J. P. Sandford, of the Navy. The mortars were very heavy, throwing thirteen-inch shells. On the morning of the 17th the first attack with the gunboats was made. The Benton, Cincinnati, and St. Louis were lashed together, on account of the deficient steam-power of the Benton, which in other respects was the most formidable boat in the fleet. They maintained, on account of the rapidity of the stream, a distance of nearly two miles, and, of course, their fire could not be very effective. The forts and batteries were isolated from each other, and at that distance any one of them presented a small mark to the gunners, and it was found very difficult to throw shells from the mortars with much accuracy, although they succeeded in forcing back the rebel encampments out of range. Indeed, the enemy kept no more men within range than was necessary to man their guns. The action was continued from mid-day until the forts were hidden by the darkness, with no very important results. The Benton was struck four times, but not seriously injured. The Cincinnati had her engines injured somewhat; but the most serious disaster was the bursting of a rifled gun on the St. Louis, by which fifteen men were killed and wounded.

From the time of the first attack on the 17th to the 26th of March this firing upon the batteries at long range was kept up,

the rebels having withdrawn their troops beyond the reach of the shells, leaving only the men at the guns, so that little damage was done. Occasionally a gun was dismounted, but this was of small consequence, when it could be so easily replaced.

At this time, the commodore reported his fleet as numbering sixteen mortar-boats, six iron-clads, and one wooden gunboat. The rebels, he stated, had at that date thirteen gunboats, independent of the five below New Madrid, and the Manassas at Memphis. There was, as he thought, great danger that the rebel fleet would attempt to ascend the river, and lay under contribution, or burn, St. Louis, Cincinnati, and other river towns. He was, therefore, very cautious in regard to exposing his gunboats. He also wrote to the Secretary that it would be useless, even if he should succeed in driving the enemy from their forts, for, with no troops to hold them, they would be re-occupied by the rebels so soon as the fleet had passed. He saw, therefore, that the only hope of capturing this stronghold was in some manner to send transports and gunboats to General Pope, in order that he might cross the river with troops that could attack the rebel works from below, and on the Tennessee shore. How to supply General Pope with the boats he needed, and not so weaken his fleet that the rebel flotilla might succeed in passing up the river, was a question not easily solved. Two methods were discussed, both difficult and perilous. One was to send two gunboats past the batteries, if that could be done. In a council of war called by the commodore it was found that the officers of the fleet, with but one exception, believed that any vessel would certainly be destroyed in an attempt to run the blockade, exposed as it would be to the fire of at least seventy guns. This plan was temporarily abandoned. The other was to send some boats around the forts and island, through the swamps and bayou on the western side of the Mississippi, and so bring them out to the river again at New Madrid. It was decided that this should be undertaken. This plan, as is said, was first suggested by General Schuyler Hamilton. In the execution of it the Navy and Army coöperated, but the success of the enterprise was mainly due to the skill and energy of Colonel T. W. Bissell and his regiment of resolute and skilful engineers. Opposite the point where Commo-

dore Foote's fleet was lying, a swamp on the Missouri side approached the river, so that in high water about five hundred feet of dry ground lay between it and the river bank. In this swamp, reaching out west and southwest, were several small bayous or swamp-lakes, partly connected by narrow channels, and at or near New Madrid a small stream came down from the direction of the swamp. The swampy ground was covered in places with heavy timber, so that six miles of timber in all, had to be cut through, while the whole length of the proposed canal was twelve miles. Through the solid ground, through the narrow swamp channels, through the underbrush and heavy timber, through the shallow lakes, a passage was to be opened fifty feet wide and deep enough to float the boats. Water, swamp-mud, slough-holes, great trees, brush, stumps, and solid earth, these were the obstacles which for twelve miles confronted our men in the chilly weather of the spring. The first work was the construction of the canal from the river-bank to the edge of the swamp. When this was finished it was a difficult matter to pass even some of the small boats through, for the water in the Mississippi was so much higher than the land below that the water rushed with great violence through the cut, and the boats could only be passed down by a large company of men on either side with guy-ropes to guide and hold them back.

It was found impracticable to cut a channel deep enough for the passage of the gunboats, and therefore the plan embraced only the transports and tugs. This required the canal to be fifty feet wide and four feet deep. The obstacles in the swamp seemed at times almost too great for the skill and energy of man. Fallen timber, some sunk entirely in the mud; great stumps, some of whose tops were below the water; huge trees, with the water now several feet around them, these often threatened to stop their progress altogether. The steam machinery of the transports and the capstans were used in dragging out the logs and tearing up the stumps, while with saws rigged for the purpose the trees which stood in the water were sawed off four feet beneath the surface, and thus an avenue, in all six miles long and fifty feet wide, was cut through this grove of the huge trees of the West. The small swamp channels were to be

straightened and made larger, and the mud scooped out of the shallow places in the bayous.

Thus a large body of troops, assisted by the sailors of the fleet, worked for nineteen days, digging in the mud and water, cutting down and dragging away the trees, and hauling along the transports, and at the end of that time had the satisfaction of reaching New Madrid with their amphibious flotilla. The troops there received them with the greatest enthusiasm, and all felt that the rebel stronghold would soon be in their hands. This little fleet of steamboats, gliding along through the forest and swamps, apparently without the aid of water, presented one of the most curious scenes of the war. But the work was not yet completed. These unarmed transports could not be used for conveying the troops in the face of the enemy and gunboats, and the question again recurred, "Is it possible for any of our iron-clads to run the gantlet of the batteries?" General Pope urged this upon Commodore Foote with great earnestness, but this prudent officer hesitated for reasons already given, to risk his boats, unless such a measure should become absolutely necessary. He was the more inclined to wait a little the progress of events, because General Halleck had intimated that measures had already been taken by him which would compel the evacuation of the enemy's works. The opinions of Commodore Foote, and also of General Halleck, will appear from the following documents :

FLAG-STEAMER BENTON, OFF ISLAND NO. 10, *March 20, 1862.*

SIR : Most of the iron-clad steamers, including this vessel, are still lying within long range of the rebel forts, and occasionally, with the mortar-boats, are throwing shells into the enemy's batteries, which have induced them to withdraw all their superfluous men not required for serving their guns. To-day the upper battery opened upon us, but was silenced in half an hour, this ship dismounting a gun. I send, to-night, a boat to sound in a narrow and shallow channel, in hopes the present rise of water in the river will enable me to dispatch a small steamer with light draught to General Pope, near New Madrid, who, as I have already informed the Department, has several times requested that I would send him two or three gunboats to enable him to cross over to the Tennessee side, with the view of attacking the rebels in the rear at this point, while we make the attack in front or on the river-side. I am apprehensive, however, from our ill success thus far, that this project may

not prove feasible. To-day, for the first time since I have been in command of the flotilla, I called a council of war, with the view of ascertaining the opinions of the officers with reference to sending, or attempting to send, aid to General Pope. The officers, with one exception, were decidedly opposed to running the blockade, believing it would result in the almost certain destruction of the boats which should attempt to pass the six forts, with fifty guns bearing upon the vessels. I have been seriously disposed to run the blockade myself with this vessel, which is better protected than the other boats, although she is slow and works sluggishly ; but, upon reconsideration, as her loss would be so great if we failed, and my personal services here are considered so important with the fleet and transports, I have, for the present, abandoned the idea.

This place is admirably chosen for defence by the rebels, as its rear can only be approached, in this stage of water, from the river-side opposite New Madrid, it being surrounded by bayous or sloughs, while its long line of six forts, commanding one another from the river front, render it almost impregnable to an attacking force. General Pope has no transports, and, without our reaching him by running the blockade, is unable to cross over to the Tennessee side from New Madrid, where he now is in force, and it is impossible for him, from the inundated state of the country, to send or march his troops to this point. Were we to attempt to attack these heavy batteries with the gunboats, or attempt to run the blockade and fail, as I have already stated in a former communication, the rivers above us—Mississippi, Ohio, and Cumberland—would be greatly exposed, not only frustrating the grand object of the expedition, but exposing our towns and cities bordering those rivers ; especially so should General Pope be unable to hold his position at New Madrid. Under these circumstances, and our boats being so ill-adapted to fighting down the river, with two rifle-guns having burst, and our shells imperfect, I am induced to act with great caution, and expose the flotilla less than under more favorable circumstances it would be my duty to do, for the great object for which the fleet was created. For the future, in the absence of instructions from higher authority, I shall be governed by circumstances as they may arise. When the object of running the blockade becomes adequate to the risk, I shall not hesitate to do it. The place may be occupied by us in a short time without an assault, as the rebels must be cut off from their necessary supplies. Still, if this does not soon take place, it may become necessary to force the blockade, or adopt some other measures which have not yet suggested themselves.

Your obedient servant, A. H. FOOTE, *Flag-Officer.*

Hon. GIDEON WELLES, Secretary of the Navy.

U. S. FLAG-SHIP BENTON, ISLAND No. 10, *March 26, 1862.*

SIR: Since my communication of the 20th instant, we have been lying off the forts at long range, occasionally giving a rifle-shot, and more frequently throwing mortar-shells upon the island and at the fortifications on the Tennessee shore. The rebels still hold the forts, but the encampments are moved beyond range, with a sufficient number of men to serve their heavy guns, which seem to be well protected from our shells by their breastworks. A communication from General Halleck (a copy of which is enclosed) leads me to hope that we may yet derive support from the Army, irrespective of General Pope's force, which will cross over from New Madrid and attack the rebels in the rear, while we make the attack in front, in case we succeed in getting two steamers and several cutters, which are now working their way toward that point, through the bayous or sloughs. Should this effort be successful, I hope to hear that a land force of some ten thousand men will be in the rebels' rear in the course of five or six days. With the exception of a ridge, or higher land, on the river-bank on the Tennessee side, from directly opposite New Madrid to nearly opposite Island No. 10, the whole country is inundated, or at least so much so as to prevent troops from other points reaching the rebels' rear, showing how admirably their position has been chosen for defence.

We now have here six iron-plated gunboats, one wooden gunboat, the *Conestoga*, and sixteen mortar-boats; one iron-clad gunboat being at Nashville, one guarding Columbus and Hickman, and two wooden boats up the Tennessee; while the *Essex*, Commander Porter, is repairing at St. Louis. We have all the mortar-boats that we use to any advantage, and still want two tow-boats for these in greater force, as we have a strong current, requiring the greatest vigilance to prevent them and the gunboats from being carried down-stream, from the want of steam-power of the latter. Colonel Buford, commanding the troops, has a force of between one thousand nine hundred and two thousand men; but who, in fact, living as they necessarily do, aboard the transports—the banks being overflowed, and they surrounded by water—cannot accomplish any thing of consequence. Thus we are waiting to open communication with General Pope at New Madrid.

I forward herewith a copy of a letter sent to me by General Strong, commanding at Cairo, from which it will be seen that the rebels have thirteen gunboats, independent of the five below New Madrid, and the *Manassas* or ram, at Memphis. I presume that these boats are not equal to ours; still, we have no means of ascertaining their character, especially those at New Orleans. I have ordered the rifle-guns as they ar-

rive at Cairo to be sent us, as our rifles are unsafe, and must be condemned as soon as others can be supplied. The rifle-shells, as well as those of the 8-inch guns and 32-pounders, also burst prematurely, and I have been obliged to drown all fuses at a distance exceeding one thousand yards.

I shall proceed with caution in our work here, being fully aware of our disadvantages. If, however, any disaster should occur from circumstances beyond my control, I have ordered the two iron-clad gunboats, Cairo and Louisville, with the wooden boats Taylor and Lexington, to meet at Cairo, or as far down as Columbus and even Hickman, to prevent the rebel gunboats from ascending the river beyond Cairo, which place is now so nearly overflowed as to render it necessary for us to remove all our ammunition. I have the honor to be, etc.,

A. H. FOOTE, *Flag-Officer.*

Hon. GIDEON WELLES, Secretary of the Navy.

P. S.—Were we able even to shell the forces out of their fortifications, they would reoccupy as we passed down the river, as we have less than two thousand troops to take possession. A. H. F.

HEADQUARTERS, DEPARTMENT OF THE MISSISSIPPI, }
ST. LOUIS, March 21, 1862. }

SIR: I have just received your report (without date) of your operations against the enemy's batteries in the vicinity of Island No. 10. While I am certain that you have done every thing that could be done successfully to reduce these works, I am very glad that you have not unnecessarily exposed your gunboats. If they had been disabled, it would have been a most serious loss to us in the future operations of the campaign; whereas the reduction of these batteries, this week or next, is a matter of very little importance indeed. I think it will turn out in the end that it is much better for us that they are not reduced till we can fully cut off the retreat of their troops.

Every thing is now progressing well on the Tennessee River toward opening your way down the Mississippi. The reduction of these works is only a question of time, and we are in no hurry on that point. Nothing is lost by a little delay *there*. I am directing all my attention now to another object, and when that is accomplished the enemy must evacuate or surrender. Very respectfully, your obedient servant,

H. W. HALLECK, *Major-General commanding.*

Flag-Officer A. H. FOOTE, commanding Naval Forces, etc.

The following letter also indicates the movements of the

rebels, who, not thinking it possible that the passage below New Orleans could be forced, were not only concentrating their troops at or near Corinth for a northern movement, but were intending at the same time to send their most formidable iron-clads up from New Orleans to destroy our fleet on the Mississippi, and then meet the army of invasion on the Ohio, perhaps at Cincinnati :

CAIRO, ILLINOIS, *March 24, 1862.*

GENERAL : I left Savannah, Tennessee, yesterday morning, and while at Perrysville, some forty miles this side of Savannah, we took on board a man by the name of M. A. Clark, formerly of Paducah, Kentucky, late of New Orleans. He left New Orleans a week ago last Thursday. I gained from him the following statement : Fort Pillow was being evacuated when he was at Memphis last Wednesday ; Confederates moving all their stores from Memphis to Corinth. The heavy guns of Fort Pillow were left under water ; Beauregard was at Jackson on Thursday last ; would leave with his troops on Friday for Corinth. Eleven engines and two hundred cars were taken from the Mississippi Central Railroad to the Memphis and Charleston Railroad, to move Johnston's forces from Decatur to Corinth. Confederates are building thirteen gunboats at New Orleans—twelve of them for river and one for sea service. One—Murray's boat—carries thirty guns, would be ready last week, and balance this week ; were to come up the river as soon as finished ; Bragg and Polk were at Corinth. Very respectfully,

JASPAR M. DRESSER, *Captain.*

Brigadier-General STRONG, commanding, Cairo.

These will explain why Commodore Foote hesitated to risk his gunboats in running the batteries. In order to diminish, if possible, the risk to the gunboats in running the batteries, should it finally become necessary to make the trial, a boat expedition was fitted out on the 1st of April with the intention of seizing the upper fort on the island, in which was mounted one very dangerous gun, a 10-inch columbiad.

The expedition comprised five boats, furnished by the gunboats Benton, St. Louis, Cincinnati, Pittsburg, and Mound City. Each of these boats carried a crew of ten men from the vessels, and they also took fifty men from Company A, Forty-second regiment Illinois Volunteers, making in all one hundred men, exclusive of officers, all under the command of Colonel

George W. Roberts, of that regiment. It was the intention to proceed through the overflowed woodland on the eastern side of the river, but this, on trial, was found impracticable, on account of the large amount of drift-wood among the trees. They then dropped down as far as was practicable without being discovered and waited until 11 o'clock at night when all the boats were got under way, and proceeded one after another, hugging the shore, and keeping in the shadow. When so near that the outlines of the battery could be seen, three of the boats formed in line, and the other two followed only a few yards behind. In this manner they approached the fort, so silently with muffled oars, that they were not discovered even by the sentinels at the guns until the boats were within less than thirty feet of them. These guards uttered a cry of surprise, fired their muskets, and ran. All now depended upon the rapidity with which they could work, for not only was the encampment roused by the sentinels' alarm, but the rebel steamboat *Grampus* had also taken the alarm and got under way, standing toward the battery. A detachment of twenty men was thrown out between the party and the rebel camp to give the alarm, or fight if necessary, and the work went on rapidly. Colonel Roberts gave personal attention to every gun to see that the spiking was effectually done. Having finished their work, the men regained without loss their boats, and returned to the fleet. This was among the most gallant feats of a war distinguished for such, its very boldness probably contributing largely to its success.

The following letters will throw some additional light upon the reasons for delay on the part of Commodore Foote, and of the nature of the work he was doing, in order that a gunboat might successfully pass the batteries. It appears that the battery at the head of the island, whose guns were spiked in the night expedition of boats under Colonel Roberts, was the one mainly relied upon by the rebels. It mounted eleven guns, and a boat would have to pass within three hundred yards of this strong work. In addition to this, there was a floating battery moored also at the head of the island, which was also a very dangerous affair for a passing boat. To remove these two defences was, therefore, of the utmost importance, and having spiked the guns of the shore battery, the guns of the fleet were

concentrated the next day upon the floating one. They were fortunate enough either to cut the lashings with their shells, or to compel the crew to do it by the severity of their fire, and it floated down the stream and lodged at some distance below, on the Missouri shore :

FLAG-STEAMER BENTON, OFF ISLAND No. 10, *April 6, 1862.*

GENERAL : Your letter of this day's date, announcing the safe arrival of the Carondelet at New Madrid, was received at 8 o'clock this evening. The telegram of Assistant Secretary Scott reached me a few minutes later.

Colonel Bissel, who has charge of the steamers and barges now in the slough, *en route* to New Madrid, has requested that two tugs, even, might be sent to you, which would, with arrangements he could make, enable you to transport your forces to the opposite side of the river, in case it was deemed inexpedient to send a gunboat for that purpose. You, yourself, in a late letter, apply for a gunboat, our smallest gunboat, even, for that purpose. I could, last night, had you made a point of having two gunboats, sent them with comparative safety, as the night was dark, while the vivid lightning enabled the pilots to keep the channel. Again, it is now too late to obtain the hay and other necessary articles for the protection of the gunboat to-night, to say nothing of the clear atmosphere, rendering a boat as visible, or as good an object to sight, as in the daytime. For these reasons I cannot, neither does a single navy officer, and, I presume, not a pilot in the squadron, consider that a gunboat could run the blockade to-night without an almost certainty of its being sunk in the attempt, especially if the guns were served with any degree of skill or ability whatever.

I am sorry to find the expression in your letter, "The success of our operations hangs upon your [my] decision," especially referring to my directing a gunboat to attempt running the blockade in this clear night; for, in my judgment, and that of all the other officers, the boat might as well expect to run it in the daytime. I cannot consider the running of your blockade, where the river is nearly a mile wide, and only exposed to a few light guns, at all comparable to running it here, where a boat has not only to pass seven batteries, but has to be kept "head on" to a battery of eleven heavy guns at the head of Island No. 10, and to pass within three hundred yards of this strong battery. If it did not sink the gunboat, we would, in the Navy, consider the gunners totally unfit for employment in the service; and, therefore, my responsibility for the lives of the officers and men under my charge induces

me to decline a request which would, especially without protection to the boat, were the rebels at all competent to perform their duty, result in the sacrifice of the boat, her officers and men, which sacrifice I should not be justified in making—certainly not now, when, by your own admission, it will be easy for the new rebel steamers, reported to be on their way up the river, to pass your batteries in the night, and if they meet my squadron, reduced by loss, so as to be unable to cope with them, can continue up the Mississippi or Ohio to St. Louis or to Cincinnati.

In view, however, of rendering you all the aid you request, and no doubt require, while I regret that you had not earlier expressed the apprehension of the necessity of two gunboats, instead of the smaller gunboat, I will, to-morrow, endeavor to prepare another boat; and if the night is such as will render her running the blockade without serious disaster at all probable, I will make the attempt to send you the additional boat requested in your letter of this day's date.

I am, respectfully, your obedient servant,

A. H. FOOTE,

Flag-Officer, commanding Naval Forces, Western Waters.

Major-General JOHN POPE, commanding Army at New Madrid.

U. S. FLAG-STEAMER BENTON, OFF ISLAND No. 10, April 5, 1862.

SIR: I have the honor to enclose several letters and papers referring to our action here within the last three or four days.

By-spiking the rebel guns in one fort, and compelling the floating battery to cut adrift from her moorings on the following day from our effective fire upon her, these have enabled the Carondelet, Commander Walke, to run, as I hope, successfully the blockade, and join General Pope at New Madrid, who has been urging me to send him one or two gunboats to cover his troops while he lands in force to attack them in front. While the Carondelet was running the blockade last night in the midst of a heavy thunder-storm, the batteries opened upon her with forty-seven guns. Still, as the preconcerted signal with that vessel of firing minute-guns was made as far as the heavy thunder would enable us to hear, I trust that she is now safely at New Madrid.

I have the honor to be your obedient servant,

A. H. FOOTE, *Flag-Officer.*

Hon. GIDEON WELLES, Secretary of the Navy, Washington, D. C.

The risk of passing the rebel works having been thus somewhat diminished, Commodore Foote waited only for a favorable

night to make the trial. He had already issued the following order to the commander of the Carondelet :

U. S. FLAG-STEAMER BENTON, OFF ISLAND No. 10, *March 30, 1862.*

SIR : You will avail yourself of the first fog or rainy night, and drift your steamer down past the batteries on the Tennessee shore and Island No. 10, until you reach New Madrid.

I assign you this service, as it is vitally important to the capture of this place that a gunboat should soon be at New Madrid for the purpose of covering General Pope's army while he crosses at that point to the opposite or to the Tennessee side of the river, that he may move his army up to Island No. 10, and attack the rebels in rear while we attack them in front.

Should you succeed in reaching General Pope, you will freely confer with him, and adopt his suggestions, so far as your superior knowledge of what your boat will perform and enable you to do, for the purpose of protecting his force while crossing the river.

You will also, if you have coal, and the current of the river will permit, steam up the river when the army moves, for the purpose of attacking their fortifications. Still you will act cautiously here, as your own will be the only boat below.

You will capture or destroy the rebel steam-gunboat Grampus, and the transports, if possible, between this place and Island No. 10, at such time as will not embarrass you in placing yourself in communication with General Pope, at the earliest possible time after leaving this place.

On this delicate and somewhat hazardous service to which I assign you, I must enjoin upon you the importance of keeping your lights secreted in the hold or put out, keeping your officers and men from speaking at all when passing the forts above a whisper, and then only on duty, and of using every other precaution to prevent the rebels suspecting that you are dropping below their batteries.

If you successfully perform this duty assigned you, which you so willingly undertake, it will reflect the highest credit upon you and all belonging to your vessel, and I doubt not but that the Government will fully appreciate and reward you for a service which, I trust, will enable the army to cross the river and make a successful attack in rear while we storm the batteries in front of this stronghold of the rebels.

Commending you and all who compose your command to the care and protection of God, who rules the world and directs all things, I am, respectfully, your obedient servant,

A. H. FOOTE, *Flag-Officer.*

Commander H. WALKE, *commanding Carondelet.*

P. S.—Should you meet with disaster, you will, as a last resort, destroy the steam machinery, and, if impossible to escape, set fire to your gunboat, or sink her, and prevent her from falling into the hands of the rebels.

A. H. F.

On the morning of the 4th of April preparations were begun for executing the above order, should the state of the weather permit. The deck was defended somewhat against plunging shot by planks stripped from the wreck of an old barge. All surplus chains were coiled over the most vulnerable parts of the boat, a device employed soon after at New Orleans on a larger scale. A very large hawser (11-inch) was wound round the pilot-house as high as the windows, the hammocks were stowed in the nettings, and for greater security still, cord-wood was piled up around the boilers on the exposed side, and every other precaution that ingenuity could suggest was used to render the boat safe during her short but perilous voyage. Each changing aspect of the heavens was anxiously studied during the day, for in a bright, clear night the passage would have been nearly as dangerous as at mid-day, and the moon was at a stage when her light would have revealed the boat as fully, for every purpose of the rebel gunners, as the sun itself.

Late in the afternoon there was every prospect of a clear, moonlight night, and it was determined to wait until the moon was down, and then to make the attempt, whatever the prospect might be, because, after such extensive preparations had been made, the moral effect of abandoning the scheme would be nearly equal to a failure. At sundown, however, there were signs of an approaching change in the weather. A haze began to spread itself over the more distant scene, and to creep along the river. The wind shifted, and, as evening drew on, dark clouds, indicating a thunder-storm, began to lift themselves above the northwestern horizon. The precautions adopted were very minute, and the orders for observing them were positive and strict. No lights were to be allowed where they could be visible, the guns were all run in, and the ports were closed. The sailors were all heavily armed; pistols, cutlasses, muskets, and boarding-pikes were within reach on all sides or in hand, on the supposition that, if the vessel should be partially disabled, there would be an attempt to capture her by boarding. Hand

grenades were provided, and hose was attached to the boilers for throwing scalding water over any who might attempt to board.

It was decided to sink the boat rather than burn her, if it should be found impossible to save her, because the loss of life would probably be very great by the explosion of her magazines. At dusk twenty sharpshooters came on board from the Forty-second Illinois regiment, under Captain Hollenstein. At 8 o'clock the gunboat went up the river about a mile for a barge containing baled hay, which was to be lashed to the exposed side. One course of bales was laid over the stern casemates, as these would be exposed for a long distance after the batteries had been passed. The barge and the piled hay reached as high as the broadside port-holes, but as the batteries on shore were some twenty feet above the water, the protection thus given was not very important.

At 10 o'clock the moon had gone down, and the sky, the earth, and river were alike hidden in the black shadow of the thunder-storm, which had now spread itself over all the heavens. The time seemed most opportune for starting; the order was given; the lines cast off, and, with her barge of hay on one side, and another with coal on the starboard side, the gunboat rounded out heavily and slowly, and laid her course down the river. In order to avoid the puffing sound of the high-pressure engine, the escape-steam was led into the wheel-house, where its harsh voice was muffled, a device which probably led to their discovery by the fire from the chimneys. For half a mile, every thing went smoothly and quietly, and all thought they might succeed in passing the batteries unobserved, when suddenly a bright, steady flame rose several feet high from each chimney-top, and for a moment it seemed as if the steamer was carrying aloft two immense torches, to light her on her way. Her upper decks and all about her brightened for a moment in the red glare. Strange as it may appear, what was deemed by all a serious accident, which would bring upon them at once the enemy's fire, created no movement in the rebel batteries. When nearly opposite the upper fort the chimneys again took fire, and at once the sentinels there gave the alarm to the fort below, by firing their muskets.

Signal-rockets were sent up both from the mainland and the island, and a cannon-shot came from Fort No. 2. It was evident that the alarm was now thoroughly given. Not a shot, however, came from the upper battery, a fact which showed how thoroughly its dangerous guns had been silenced by the party that had landed and spiked them. This, and the drifting away of the floating battery, had very much to do with the safety of the Carondelet.

But one course was now possible for the officers of the gunboat. The vessel was at once put under a full head of steam, and was urged down the river at her utmost speed, for the rebels were now making swift preparations at every gun that could be brought to bear. The storm was then at its height, and its fearful character, which would have been thought dangerous at any other time, was welcomed, as increasing the chances of escape. The darkness was so intense as to shut out earth and heaven alike, except as lighted momentarily by the lightning's glare. The gleam and roar of the guns of the batteries could scarcely be distinguished from the flash and the thunder of the cloud. The fires of heaven and earth were mingled, and none could tell whether the deck was shaken by the explosion above or the cannon below. The rain fell in the sweeping torrents of a summer shower. Shot and shell, and rifle and musket balls sang and shrieked and roared around them so as to be heard above the storm. Each flash of lightning revealed the rebels loading, training, and firing their guns as the boat came within range. The steamer, also, was disclosed for a moment, but as she was moving swiftly with the current, it was nearly impossible to get her range; it was evident that only what is called a chance shot would strike her. Most of the balls and shell flew high above her, owing to the fact that the alternations of light and darkness were so rapid as to deceive the rebel gunners as to the gunboat's position. She was much nearer to them than they supposed, and they fired at a wrong elevation. The boat was guided as close along the bank as she could safely run, where, indeed, it would have been difficult to depress their guns so as to strike her, even had she been plainly seen. At this point their greatest danger was not from the rebel batteries: the current was not only rapid, but shifted from side to side with

the sharp curve of the stream, and bars also ran out from either shore. The intense darkness prevented the pilots from knowing the exact position of the boat, and the pilots learned their position only as they caught glimpses of the shore by the flashes of lightning. On the forecastle the lead was kept going, and the depth of water was constantly reported. It contributed largely to the steamer's safety that she had on board Captain Hoel, first master of the Cincinnati, who had been engaged in navigating the Mississippi for more than twenty years. This gentleman stood on the deck, exposed to the double torrent of rain and bullets, and, watching for each momentary revelation which the lightning made, gave directions for steering the boat. The gleams of lightning, the momentary report of the soundings, and his intimate knowledge of localities, enabled Captain Hoel to judge correctly in the main, of the gunboat's position. Once, however, during the passage she was in great danger of being lost. The steamboat and her barges of course presented a very large surface to the current, and this gave her occasionally a heavy sheer. In the darkness, and the blinding rush of the storm, these were not always on the instant noticed. Caught in this manner by the swift stream, she was drifting toward a dangerous bar, where she would have grounded under the guns of the batteries, when a broad flash lit up the river a moment, followed instantly by the sharp, repeated command, "Hard a-port!" and she obeyed her helm, and regained the current just in season to save her.

Contrary to expectation, they found no battery at the foot of the island, where it was reported that one of long-range guns had been planted. The floating battery, which had drifted from its moorings at the head of the island, was three miles below, and this remained to be passed. As the gunboat was not in fighting trim, she kept close on the Missouri shore, the battery firing only a few harmless shots as the Carondelet passed, and then the peril of the passage was over, and exulting shouts burst from the crew and the soldiers, and the signal-guns were fired announcing their safety to the fleet above, and soon the gunboat rounded to at New Madrid, welcomed by bonfires and every possible exhibition of joy. All felt that the fate of Island No. 10 at length was sealed. In rounding to, a slight accident oc-

curred, through a misunderstanding of an order by the engineer, and the boat was run hard aground; but after an hour of effort, by shifting some of the bow-guns to the stern, and bringing all the men aft, she was safely backed off, and the perilous voyage was over at 1 A. M. Great credit was due, and was duly given, to the brave and skilful men by whom this important service was executed, proving that the strong river gates of the rebels could be opened by the iron-clads. On the evening of the 6th the Pittsburg followed the Carondelet through the gantlet of the batteries, and these two were deemed sufficient to protect the transports in conveying over the troops.

On the morning of the 7th the Carondelet and the Pittsburg went down the river, and engaged and silenced the batteries of field-guns which had been planted to prevent the landing of our forces; and the way having thus been prepared, by 12 o'clock that night, all the troops which were designed for crossing the river had been safely landed. So soon as the rebels saw that their works could no longer be held, they began to evacuate them, and at 3.25 on the morning of April 7th, before any troops had been crossed over, Island No. 10 was surrendered to Commodore Foote. This surrender was made before the gunboats had attacked and silenced the land batteries on the Tennessee shore. The following is Commodore Foote's official report of the surrender:

FLAG-STEAMER BENTON, OFF ISLAND NO. 10, *April 8*—1 A. M.

My telegram, three hours since, informed the Department that Island No. 10 had surrendered to the gunboats. Captain Phelps has this instant returned, after having had an interview with the late commandant. I have requested General Buford, commanding the troops, to proceed immediately, in company with two of the gunboats, and take possession of the island. The batteries on the Tennessee shore have been hastily evacuated, where we shall find, no doubt, in the morning, large quantities of munitions of war.

I communicate with General Pope, who has, under cover of the two gunboats which gallantly ran the blockade in the thunder-storm, crossed the river in force, and was ready, as well as the gun and mortar boats, with General Buford and his troops, to make a simultaneous attack upon the rebels, had they not so hastily evacuated the Tennessee shore and surrendered Island No. 10.

A full report will be made as soon as we can obtain possession of the land batteries, and I am able to communicate with General Pope.

A. H. FOOTE, *Flag-Officer, etc.*

Hon. GIDEON WELLES, Secretary of the Navy.

FLAG-SHIP BENTON, ISLAND No. 10, April 8, 1862 (*via CAIRO*).

I have the honor to inform the Department that since I sent the telegram last night, announcing the surrender to me of Island No. 10, possession has been taken of both the island and the works upon the Tennessee shore by the gunboats and the troops under command of General Buford. Seventeen officers and three hundred and sixty-eight privates, besides one hundred of their sick and one hundred men employed on board the transports, are in our hands, unconditional prisoners of war.

I have caused a hasty examination to be made of the forts, batteries, and munitions of war captured. There are eleven earthworks, with seventy heavy cannon, varying in calibre from 32 to 100-pounders, rifled. The magazines are well supplied with powder, and there are large quantities of shot, shells, and other munitions of war, and also great quantities of provisions. Four steamers afloat have fallen into our hands, and two others, with the rebel gunboat Grampus, are sunk, but will be easily raised. The floating battery of sixteen heavy guns, turned adrift by the rebels, is said to be lying on the Missouri shore below New Madrid. Two wharf-boats, loaded with provisions, are also in our possession.

The enemy upon the mainland appears to have fled with great precipitation after dark last night, leaving, in many cases, half-prepared meals in their quarters; and there seems to have been no concert of action between the rebels upon the island and those occupying the shore, but the latter fled, leaving the former to their fate. These works, erected with the highest engineering skill, are of great strength, and, with their natural advantages, would have been impregnable if defended by men fighting in a better cause.

A combined attack of the naval and land forces would have taken place this afternoon or to-morrow morning had not the rebels abandoned this stronghold. To mature these plans of attack absolutely required the last twenty-three days of preparation. General Pope is momentarily expected to arrive with his army at this point, he having successfully crossed the river yesterday, under a heavy fire, which, no doubt, led to the hasty abandonment of the works last night. I am unofficially informed that the two gunboats which so gallantly ran the fire of the rebel

batteries a few nights since, yesterday attacked and reduced a fort of the enemy opposite, mounting eight heavy guns.

I am, sir, respectfully, etc.,

A. H. FOOTE, *Flag-Officer,*

Commanding Naval Forces, Western Waters.

Hon. GIDEON WELLES, *Secretary of the Navy.*

The following congratulatory letter was telegraphed to Commodore Foote on the 9th of April:

Flag-Officer A. H. FOOTE, commanding Gunboats of Western Waters :

SIR : A nation's thanks are due you and the brave officers and men of the flotilla on the Mississippi, whose labors and gallantry at Island No. 10, which surrendered to you, have for weeks been watched with intense interest. Your triumph is not the less appreciated because it was protracted and finally bloodless.

To that Being who has protected you through so many perils, and carried you onward through successive victories, be the praise for His continued goodness to our country, and especially for this last great success of our arms.

Let the congratulations to yourself and your command be also extended to the officers and soldiers who coöperated with you.

GIDEON WELLES, *Secretary of the Navy.*

The following letter seems necessary, in order to present *officially* some facts connected with the surrender of Island No. 10, and the operations of the gunboats below New Madrid. Reference is also made to the battle of Pittsburg Landing, which will be considered in another place :

U. S. FLAG-STEAMER BENTON, OFF ISLAND NO. 10, April 11, 1862.

SIR : I have the honor to enclose a report from Commander Walke, of the gunboat Carondelet, detailing the services rendered by him, and the Pittsburg, Lieutenant Commanding Thompson, in the vicinity of New Madrid, from which it will be seen that the boats opened upon and effectually silenced and captured several heavy batteries on the Tennessee side of the river, on the 6th and 7th instant, without which destruction it would have been impossible for General Pope to have crossed the river for the purpose of attacking the rebels in the rear at Island No. 10, while the gun and mortar boats would make the attack in front.

There has been an effective and harmonious coöperation between the

land and naval forces, which has, under Providence, led to the glorious result of the fall of this stronghold, Island No. 10, with the garrison and munitions of war; and I regret to see in the dispatches of Major-General Halleck, from St. Louis, no reference is made to the capture of forts, and the continuous shelling of gun and mortar boats, and the Navy's receiving the surrender of Island No. 10, when, in reality, it should be recorded as an historical fact, that both services equally contributed to the victory—a bloodless victory—more creditable to humanity than if thousands had been slain.

I also enclose reports from Lieutenants Commanding Gwin and Shirk, of the gunboats Tyler and Lexington, in the Tennessee, giving a graphic account of that great battle, and the assistance rendered by these boats near Pittsburg; stating that “when the left wing of our army was being driven into the river, at short range, they opened fire upon them, silencing the enemy, and, as I hear from many army officers on the field, totally demoralizing his forces, and driving them from their position in a perfect rout, *in the space of ten minutes.*”

These officers and men, as well as those of Commander Walke, and the officers and men of the Carondelet and Pittsburg, behaved with a degree of gallantry highly creditable to themselves and the Navy.

I proceed to-day, with the entire flotilla, to New Madrid, and leave to-morrow for Fort Pillow, or the next point down the river which may attempt to resist the raising of the blockade.

I have the honor to be, very respectfully, your obedient servant,

A. H. FOOTE, *Flag-Officer.*

Hon. GIDEON WELLES, Secretary of the Navy, Washington, D. C.

The importance of the capture of this strongly fortified position, the destruction of a part of the river fleet of the rebels, and the preservation of our own iron-clads can only be clearly seen in connection with the great battle of Pittsburg Landing, which was fought near the same time, on the 6th and 7th of April. By these two victories the second grand line of Western defence which the rebels had established, and which reached from the Mississippi to Chattanooga, was utterly broken, and the proposed northern advance by the Mississippi, and by the main army from Corinth, was turned into disastrous defeat. It detracts nothing from the gallantry of the armies to state that neither of these victories could have been won without our gunboats. It does not disparage the river navy, then so small, to say that it could have done little or nothing alone. They were

both necessary in the national movement, and neither could have been spared without making certain the success of the rebels. If any officer or soldier of the Army should feel that the Army in these pages appears only in the background, let such a one consider that this is not a history of the war, but of the operations of the Navy; and while it has been the wish of the writer to place these in their proper light, he remembers with equal gratitude and pride the sacrifices and the heroism of those who fought on land, but whose deeds it is not the special province of this history to relate.

With the surrender of Island No. 10, the public career of Commodore Foote was brought nearly to a close. The wound which he received at Donelson did not heal, and it was of a very painful and irritating nature, depriving him of the sleep which, amid incessant labor, he needed so much; and this, with the intense anxiety, was rapidly sapping his vitality. On the 22d of April, as will be seen by the following order, Captain (now Admiral) Charles H. Davis was sent out to assist him:

NAVY DEPARTMENT, WASHINGTON, *April 22, 1862.*

SIR: Upon the completion of your present duties you will proceed to Cairo, Illinois, without delay, and report to Flag-Officer A. H. Foote for such duty as he may assign you in the naval forces under his command.

I am, respectfully,

GIDEON WELLES, *Secretary of the Navy.*

Captain CHARLES H. DAVIS, *U. S. Navy, N. Y.*

CHAPTER XXXVI.

THE BATTLE OF PITTSBURG LANDING.—THE WORK OF THE GUNBOATS IN THAT ACTION.

THE battle of Pittsburg Landing, or perhaps more properly of Shiloh, was the first great conflict of the war. The battle of Bull Run, viewed as a military operation merely, was by no means a very important affair, though in its first moral consequences it equalled a great defeat. But at Pittsburg there was desperate fighting for two days, between powerful armies, led by some of the most skilful officers of the country, and who knew that the struggle there must be one of the hinge-points of the war; and now, when we look back over the whole field of strife, and consider the places which have been made sadly illustrious by blood, this still ranks among the greatest and fiercest battles of the rebellion.

After the capture of Forts Henry and Donelson, and the evacuation of Bowling Green and Columbus, the rebel leaders in the West changed somewhat their plan, and concentrated their strength upon two main points, intending to unite their land forces with their river flotilla for the purpose of an overwhelming movement upon the North. Leaving only enough to hold, as they thought, securely Island No. 10, they drew in their troops from the Mississippi and from other points, and massed them at Corinth, a point from which they could easily move down the Tennessee to the Ohio, if the way could once be opened. At the same time the Mississippi flotilla was held in readiness to ascend that river and go up to St. Louis, or enter the Ohio, if the opportunity should offer. Some iron-clads, which they were building at New Orleans, were nearly ready,

and the Louisiana in particular was expected to destroy the fleet of Foote, and thus open all the upper rivers. With the rebel fleet thus commanding the rivers, should their land forces win a decided victory on the upper Tennessee, the Northwest, at least for the time, would be at their mercy. It has been shown already how these considerations influenced Commodore Foote to be very cautious in regard to exposing his gunboats when it was not absolutely necessary.

The rebel army has been variously estimated at from sixty to one hundred thousand men; the exact number can only be ascertained from their own official papers, not now within reach. The forces at any one time at the disposal of General Grant probably did not exceed fifty thousand; but as the available troops varied constantly by the casualties of the fight, and the arrival of reinforcements, the exact number cannot be determined. The rebel army, as well as our own, had been rather hastily assembled, and the plan of their officers was to strike Grant before Buell could join him with the army that had been confronting Johnston in Middle Tennessee, and as Buell was near, the attack was hastily made.

It is not, of course, within the province of this work to give a detailed account of this bloody fight. All that will be attempted is, so far to present some of the principal movements as to show the part which was taken in the battle by the gunboats. Our army was stationed just above Pittsburg Landing, in a semicircular form, with both wings resting near the river, while the most distant point in the convex line was perhaps five miles away. Stretched around this semicircle, and parallel to it, lay the forces of the rebels on Sunday morning. They had marched out from Corinth on Friday and Saturday, and, under cover of the woods, had prepared themselves for a surprise attack early on Sunday morning. Of this army, probably the ablest officer in the rebel service, General A. S. Johnston, had the chief command. Under him were Beauregard, Bragg, Hardee, Polk, Breckenridge, and Cheatham.

At about half-past 5 o'clock in the morning of Sunday, April 7th, the rebel lines were in motion, and they dashed on with an enthusiasm which showed that they were entirely confident of success, and certainly not until near the close of that

bloody and disastrous day did any thing occur by which that confidence was diminished. The main attack of the rebels was directed upon our centre, which they expected to pierce, and then, by sweeping round to the right and left, strike both our wings in the rear. Their first purpose was nearly accomplished. The division of General Prentiss, who held the advance, was nearly overwhelmed at the first onset, and, though partially disorganized by an assault for which they were not prepared, they bravely held their ground as firmly as possible, when forced gradually back by numbers, till at length, attacked on both flanks as well as in front, their organization was broken up and they were swept away, the rebels occupying their camps, and then pressing onward still. By 10 o'clock nearly the whole of our centre had been swept out and forced back toward the river, and the two wings only were left with their organizations entire. These two bodies made a gallant stand, even when the last brigade of the front had given way, and many of the troops of the broken divisions were rallied in the rear, and were to some extent made available again. Gradually the rebel attack veered to the left, and about 3 o'clock in the afternoon a desperate effort was made to turn General Hurlbut's position on the left, and get possession of the landing, the stores, and the transports. Had this succeeded, all would have been lost. Our troops had been forced back until they occupied a line not more than two-thirds of a mile in length, from the river bank on the right, round to the river on the left. They were greatly disordered and huddled together, a victorious army surrounding them, and the deep, swift river behind them, with no possibility of retreat. One more successful charge would force them to the river's bank, or over into the stream. For this the rebels were evidently preparing, but for a little while it was uncertain on what point the coming rush would be made.

From the beginning of the fight until after 1 o'clock, P. M., the wooden gunboats Tyler and Lexington had been moving up and down the stream, anxious to render some assistance, but receiving no orders to do so. At that time Lieutenant Gwin, of the Tyler, having as yet received no instructions from any quarter, and growing impatient, as shot and shell from the enemy's batteries were falling thick around them, sent an officer

to communicate with General Hurlbut, and requested permission to open fire upon the woods, in the direction of the rebel batteries. General Hurlbut expressed his thanks for this offer of support, saying, that without aid he could not hold his position for an hour, and indicated the proper line of fire. At ten minutes before 3 o'clock the Tyler opened fire, and with such fine effect, that in a short time the rebel batteries at that point were silenced.

About 4 o'clock the Tyler dropped down to Pittsburg Landing, in order to communicate with General Grant. His reply was, that the commander of the gunboats must use his own judgment in the case. At 4 p. m. the Lexington and Tyler went up in company and took a position only three-fourths of a mile above the landing; so near had the rebel batteries already come, that our troops were being pressed back. In thirty-five minutes the batteries of the enemy's right were again silenced, thus relieving for a time our left. But at half-past 5 p. m. our lines had been so forced in toward the river, that the rebels gained position on our left, only an eighth of a mile from the landing, and massed their troops for a final charge, with which they expected, and not without reason, to crush what remained of the organization of our army. Between our position and where the rebels were preparing for this last rush on our contracted lines, was a ravine which they must cross in the assault, and here the two gunboats took up position. At the same time Colonel Webster, of the staff of General Grant, and an accomplished artillery officer, hastily collected some scattered guns within reach, among which were two siege-guns, 32-pounders, and placed them where they would play on the left flank of the rebel line when they should advance. This was the decisive point in the great battle. The next half hour would settle the question whether a victorious rebel army should occupy and lay under contribution the States north of the Ohio, and their cities be plundered or burned. There was a brief lull in the firing while the rebel host was making the final preparation. In a semicircular mass, the centre not half a mile from the river, lay our partially disorganized troops, who, with the exception of the shameless skulkers, had fought with persistent bravery, and whose main apparent defence from

the coming storm were the guns collected so hastily by Colonel Webster. Only those, as it seemed, to check the fierce onset so soon to come. The delay was for a few minutes only, and they came, preceded by a storm of shot from their batteries, that swept over all the space, and up to the very banks of the river. As stated by General Grant, their troops went massed so as to strike the main blow at the left, so that, by turning it, the landing, stores, and transports, could be seized. It seems not to have occurred to them that this would bring their columns under the guns of the steamers at point-blank range. The two gunboats had rounded to, opposite the ravine, so that their broadsides could be brought to bear. The dense masses swarmed in across the line of their fire, and then from those heavy broadside guns such a hail of shells tore through them as probably never before struck a body of men at that short range. They cut down the ranks like solid shot, and then added to the slaughter by explosion; they screamed over their heads and burst in the air, sending down a storm of death; they cut the trunks and heavy branches of trees, that fell upon them, and that ravine, by the rapid fire from the gunboats, became a valley of death that the living could not pass. At the same time the field-guns, under Colonel Webster, were also making a fearful havoc on the other flank, and that last charge was checked and turned back, and in that brief artillery-fire the question of the great Northern invasion was settled, and the victory of the rebels began in that hour to be turned into defeat. Some of the first hours of the evening were anxious ones. The rebels, it was said, intended a night attack, but the gunboats searched the woods and their camps with their terrible shells, forcing their lines farther and farther back, until, when Nelson was ready next morning to attack, he had to march some distance in search of the foe. That day, as is known, sent the shattered remnant of the rebel army back to its camps at Corinth.

Others have criticised severely the disposition of our troops upon that bloody field, and the manner in which they were handled. The writer of this history does not propose to discuss these points. That the rebel army was managed with consummate skill is conceded by those who are capable of judging; and all agree that, except the few thousand cowards who left their

regiments and skulked in the rear and under the bluffs, our soldiers fought with steady, enduring bravery, and brigades and divisions were, on the whole, skilfully handled: and yet, at half-past 5 o'clock on Sunday evening, they had been forced back almost to the bank of the river, and into a position where it would seem nothing could save them from destruction but the rapid broadsides of the gunboats, and the shelling of their lines during the night, preventing any new attack, and forcing them gradually back.

To authenticate this statement, the following extract from the official report of Lieutenant William Gwin, commanding the gunboat Tyler, is here given, and the reader can judge of the rapidity of the fire, by observing the number of shells (188) thrown by this one boat.

U. S. GUNBOAT TYLER, PITTSBURG, TENNESSEE, *April 8, 1862.*

SIR: I have the honor to inform you that the enemy attacked our lines on the left the morning of the 6th instant, at 6.30, and, by his overwhelming numbers, forced our men to fall back in some confusion. At 9.25, finding that the rebels were still driving our left wing back, I steamed up to a point one mile above Pittsburg, taking a good position to support our troops, should they be forced down to the banks of the river. At 10.15 the Lexington, Lieutenant Commanding Shirk, joined me, having come up from Crump's Landing. After a short time she returned, for the purpose of supporting the command of General Wallace, which occupied that point.

Not having received any instructions from the commanding general in regard to the service to be rendered by the gunboats, I awaited them patiently, although, for an hour or more, shot and shell were falling all around us. Feeling that, could some system of communication be established, the Tyler might be of great advantage to our left wing, at 1.25 P. M. I sent an officer, requesting that I might be allowed to open on the woods in the direction of the batteries and advancing forces of the enemy. General Hurlbut, who commanded on our left, sent me word to do so, giving me directions how to fire that I might do it with no danger to our troops, and expressing himself grateful for this offer of support, saying that without reinforcements he would not be able to maintain the position he then occupied for an hour. Therefore, at 2.50, I opened fire in the line directed, with good effect, silencing their battery on our left; at 3.50 ceased firing, and dropped down opposite the landing at Pittsburg.

Sent Mr. Peters, gunner, on shore, to communicate with General Grant for further instructions. His response was, to use my own judgment in the matter. At 4 P. M. the Lexington, Lieutenant Commanding Shirk, having arrived from Crump's Landing, the Tyler, in company with the Lexington, took position three-quarters of a mile above Pittsburg, and opened a heavy fire in the direction of the rebel batteries on their right, the missiles from which were falling all around us. We silenced them in thirty minutes. At 5.30, the rebels having succeeded in gaining a position on our left, an eighth of a mile above the landing at Pittsburg and half a mile from the river, both vessels opened a heavy and well-directed fire on them, and in a short time, in conjunction with our artillery on shore, succeeded in silencing their artillery, driving them back in confusion.

At 6 P. M. the Tyler opened deliberate fire in the direction of the enemy's right wing, throwing five-second and ten-second shell; at 6.25 ceased firing.

At 9 P. M. the Tyler again opened fire, by direction of General Nelson (who greatly distinguished himself in yesterday's engagement), throwing five-second, ten-second, and fifteen-second shell, and an occasional shrapnel from the howitzer, at intervals of ten minutes, in the direction of the enemy's right wing, until 1 A. M., when the Lexington relieved us, and continued the fire at intervals of fifteen minutes, till 5 A. M., when, our land forces having attacked the enemy, forcing them gradually back, it made it dangerous for the gunboats to fire.

At 7 I received a communication from General Grant—enclosed is a copy—which prevented the gunboats taking an active part throughout the rest of the day. Lieutenant Commanding Shirk deserves the highest praise for the efficient manner in which the battery of the Lexington was served. At 5.35 P. M. the enemy were forced to retreat in haste, having contested every inch of ground with great stubbornness during the entire day.

The officers and men of this vessel displayed their usual gallantry and enthusiasm during the entire day and night. Your "old wooden boats," I feel confident, rendered invaluable service on the 6th instant to the land forces. Gunner Herman Peters deserves great credit for the prompt and courageous manner in which he traversed our lines, conveying communications from this vessel to the commanding general.

The rebels had a force of one hundred thousand men. A. S. Johnston (killed, body found on the field), Beauregard, Hardee, Bragg, and Polk being their commanding generals. Governor Johnson, provisional governor of Kentucky, is a prisoner in our hands, mortally wounded

Loss severe on both sides ; ours probably ten thousand ; the rebels suffered a much greater one. I think this has been a crushing blow to the rebellion.

I am happy to state that no casualties occurred on either of the gunboats. The Tyler expended one hundred and eighty-eight shell; four solid shot, two stand of grape, and six shrapnel. Enclosed I send you Lieutenant Commanding Shirk's report.

Your obedient servant,

WILLIAM GWIN,

Lieutenant commanding division of Gunboats on Tennessee River.

Flag-Officer A. H. FOOTE,

commanding Naval Forces on Western Waters.

Thus, on the same day, the navy of the Western rivers received the surrender of one of the rebel fortifications on the Mississippi, and aided very materially in saving from destruction our army at Pittsburg Landing, repelling the last attack of the rebels, demoralizing their army by the destructive broadsides of the steamers' heavy guns, and holding them back during the night until Buell and Nelson were ready to attack.

CHAPTER XXXVII.

FURTHER OPERATIONS ON THE TENNESSEE.—MOVEMENTS ON THE MISSISSIPPI.—ATTACK ON FORT PILLOW.—FIGHT WITH THE GUNBOATS.

Soon after the battle of Pittsburg the value of the gunboats in connection with the campaign in the West was very clearly shown. It was important to cut the rebel lines of communication leading southward from the Tennessee, and the great trunk railway running from Virginia through East Tennessee to Memphis. One of these lines was the Memphis and Charleston Railway. Not far from Chickasaw, a point in Alabama which can be reached by steamers, this railway crosses Bear Creek by a bridge of two spans, and about five hundred feet of trestle-work. If this could be destroyed, it would seriously interrupt travel and the transportation of troops and munitions over a very important road. But a small body of troops could not be marched there for such a purpose, nor could unarmed transports pass over a river held by an enemy, and on whose banks batteries could be placed at every convenient point. It was, therefore, determined to send a detachment of two thousand troops in transports, under convoy of the Lexington and Tyler. This work was successfully performed by these gunboats. The troops were safely taken there, the bridge and trestle-work and telegraph wires were destroyed, and the soldiers were returned to Pittsburg Landing without loss.

The great rivers of the West were the only lines of communication which were available for our armies moving South, because the railways could be so easily destroyed in an enemy's country; but so long as our gunboats could control the river channel, troops could be transported rapidly and cheaply, without the fatigue of a march from point to point, and at short notice could be concentrated at any spot. In the same manner

supplies of all sorts could be sent forward securely under the protection of these armed steamers. Whenever a battle could be fought within the range of their guns, they could, as at Pittsburg Landing, sweep the enemy away from any position which their broadsides commanded; and with their heavy guns and shells, their showers of grape and canister, they were found an overmatch for the fortifications on the rivers of the West, and the streams and the sounds of the South. Rosecrans's army must have been captured when cooped up in Chattanooga, if troops could not have been sent to their relief over the rivers; and it was by the rivers that the supplies reached them after our forces had effected a lodgment on the banks of the Tennessee under Lookout Mountain.

By the capture of Island No. 10, the river was opened to Fort Pillow, a short distance above Memphis, and General Pope's army could, of course, move safely on in transports under protection of the gunboats. This army of twenty thousand men reached the vicinity of Fort Pillow on the 13th of April, and preparations were made for attacking the forts. But before the forts were reached, five rebel gunboats appeared below. Chase was immediately given and shots exchanged without effect, until the rebel fleet took refuge under the guns of the forts. The plan of attack was to place the mortar-boats on the Arkansas shore within range of the forts, to be protected by the gunboats, while General Pope and army should be landed five miles above, and if possible gain the rear of the fortifications, while the gun and mortar boats should make the attack in front.

In the afternoon General Pope returned with the transports, having found that he could not reach the rear of the rebel works from any point above. From the success of the canal at Island No. 10, it was proposed to cut one on the Arkansas shore opposite Fort Pillow, and so pass some of the gunboats below the fortifications. At this date (April 14th) Commodore Foote wrote as follows, in a note to the Secretary: "The effects of my wound have quite a dispiriting effect upon me, from the increased inflammation and swelling of my foot and leg, which have induced a febrile action, depriving me of a good deal of sleep and energy. I cannot give the wound that attention and rest it absolutely requires until this place is captured."

He was drawing very near the close of his brilliant career. A few days after this he left the active service never to return, leaving a place which it was by no means easy to fill. The last official letters of this lamented officer have for the whole country a melancholy interest, and they are inserted here both on that account and because they set forth very clearly and better than any more condensed statement could, the events as they were then occurring, and the actual situation of Western affairs.

U. S. FLAG-STEAMER BENTON, OFF FORT PILLOW, *April 17, 1862.*

SIR: I have the honor to inform the Department that yesterday, and the day preceding, I had, with General Pope, made such arrangements, by combining our own with the forces of the army, that our possession of this stronghold seemed to be inevitable in less than six days. I had even stronger hopes of this desirable result than I entertained even at No. 10, till the actual surrender was tendered. Our object then, after leaving a force to garrison the place, was to proceed to Memphis immediately, where, I have good authority for stating, we would have been received without opposition. But the sudden withdrawal of the entire army of General Pope this morning, under orders to proceed directly up the Tennessee River to join General Halleck's command at Pittsburg, has frustrated the best matured and most hopeful plans and expectations thus far formed in this expedition. Two volunteer regiments, under command of Colonel Fitch, were left here by General Pope to coöperate with the flotilla. While I deeply regret the withdrawal of General Pope's command, I am not at all questioning the propriety, and even the necessity, of its presence at Pittsburg, and I shall use every exertion with the force remaining to accomplish good results.

It is a great object to obtain early possession of this place and Memphis, as ten of the rebel gunboats are now at Fort Pillow, and ten others are reported as *en route* to Memphis, and daily expected at that place. It is reported that Commodore Hollins left Fort Pillow on Sunday to bring up the heavy gunboat Louisiana, now about completed at New Orleans. With the exception of this vessel, however, we have little to apprehend from the other rebel gunboats, according to the representation of the four or six deserters lately coming to us from the gunboats at Fort Pillow. At all events, the Department may rest assured of every exertion being made on our part to accomplish the great work intrusted to this expedition.

I have the honor to be, your obedient servant,

A. H. FOOTE, *Flag-Officer.*

Hon. GIDEON WELLES, *Secretary of the Navy, Washington, D. C.*

U. S. FLAG-STEAMER BENTON, OFF FORT PILLOW, *April 19, 1862.*

SIR: I have the honor to inform the Department that since my last communication of the 17th instant, we have been occasionally throwing shells into the rebel fortifications from the mortar-boats, which have been returned from their rifled guns, without producing any effect. Ours have compelled one encampment to remove its quarters, and from several deserters we learn have otherwise discomfited them.

One or two examinations made by Colonel Fitch, commanding the two regiments left to coöperate with the flotilla by General Pope on withdrawing his army, have been unsuccessful, thus far, in finding a bayou for our boats, and a position below Fort Pillow, where a battery can be placed to command the river below. I shall again render him assistance by sending over small boats, in hopes that at a distance farther up the river we may be able to discover a bayou leading into a lake, in which water sufficient may be found for our gunboats, with a view of erecting a battery under their protection, which will blockade the river below and enable his force, although not exceeding fifteen hundred men, to come upon the rebels in rear, while, with the remaining gunboats here, we attack them in front.

I am greatly exercised about our position here, on account of the withdrawal of the army of twenty thousand men, so important an element to the capture of the place. Fort Pillow has for its defence at least forty heavy guns in position and nine gunboats—six of them, however, being wooden boats, but armed with heavy guns—with a force of six thousand troops. Our force consists of seven iron-clad and one wooden gunboat, sixteen mortar-boats, only available in throwing shells at a distance, and even worse than useless for defence, and a land force of two regiments, not exceeding fifteen hundred troops. Under these circumstances an attack on our part unless we can at first establish a battery below the fort under the protection of the gunboats, and to coöperate with it after its completion, would be extremely hazardous, although its attempt might prove successful, and even be good policy under other circumstances; but it can hardly now be so regarded, as a disaster would place all that we have gained on this and other rivers at the mercy of the rebel fleet, unless the batteries designed to command the river from below are completed at No. 10, or at Columbus, which I very much doubt. I therefore hesitate about a direct attack upon this place now, more than I should were the river above properly protected, although by it and loss of time the rebels may succeed in getting up to Fort Pillow their entire fleet of gunboats. As I stated in my last communication, had not General Pope's army been withdrawn, we have every reason for believing that a plan we had adopted would have insured the fall of Fort Pillow in four days, and enabled us

to have moved on Memphis two days afterward. It has always been my expectation that a large army would coöperate with the gunboats, and now the fall of Corinth and movements of our troops on to Memphis seem to be essential to our holding this place and reaching Memphis with the flotilla. I have the honor to be, etc., etc.,

A. H. FOOTE, *Flag-Officer.*

Hon. GIDEON WELLES, *Secretary of the Navy, Washington, D. C.*

U. S. FLAG-STEAMER BENTON, OFF FORT PILLOW, *April 28, 1868.*

SIR: I have the honor to inform the Department that since my last communication, with the exception of a day or two, when the heavy rains caused the mortars to recoil dangerously on the wet platform, we have been shelling the rebel batteries at Fort Pillow, and most of the time kept their gunboats beyond our range. Colonel Fitch, in command of the twelve hundred infantry, left here by General Pope, has been examining bayous and creeks, with a view of getting guns to blockade the river, and prevent the new gunboats from coming up from New Orleans and Memphis; but as the rebels are in great force, and no tools or conveniences for cutting through the swamps were left by General Pope when his army, so unfortunately for us, was withdrawn, he has made as yet no satisfactory progress.

I am doing all in my power toward devising ways and means preparatory to a successful attack on the forts, and shall continue to do so; but as the capture of this place was predicated upon a large land force coöperating with the flotilla, or its being turned by the army marching upon Memphis, and considering the difficulties of fighting the flotilla down-stream with our slow boats compared with up-stream work, the Department will not be surprised at our delay and having made no further progress toward the capture of this stronghold of the rebels. I shall, however, do all in my power to be successful here, and exert myself, even beyond my impaired health and strength, toward the accomplishment of this great object.

The rebels are strongly fortified on land, and have eleven gunboats lying near, or rather below their fortifications. A resident of the place informs me this morning that thirteen gunboats are now here, seven of which, however, are mere river steamers with boilers and machinery sunk into the hold, and otherwise protected; but they carry from four, six, to eight guns of heavy calibre, some of which are rifled. The other boats are iron-plated or filled in with cotton. The large steamer of sixteen or twenty guns being plated, and named the Louisiana, has not arrived, but is daily expected from New Orleans. I have, etc.,

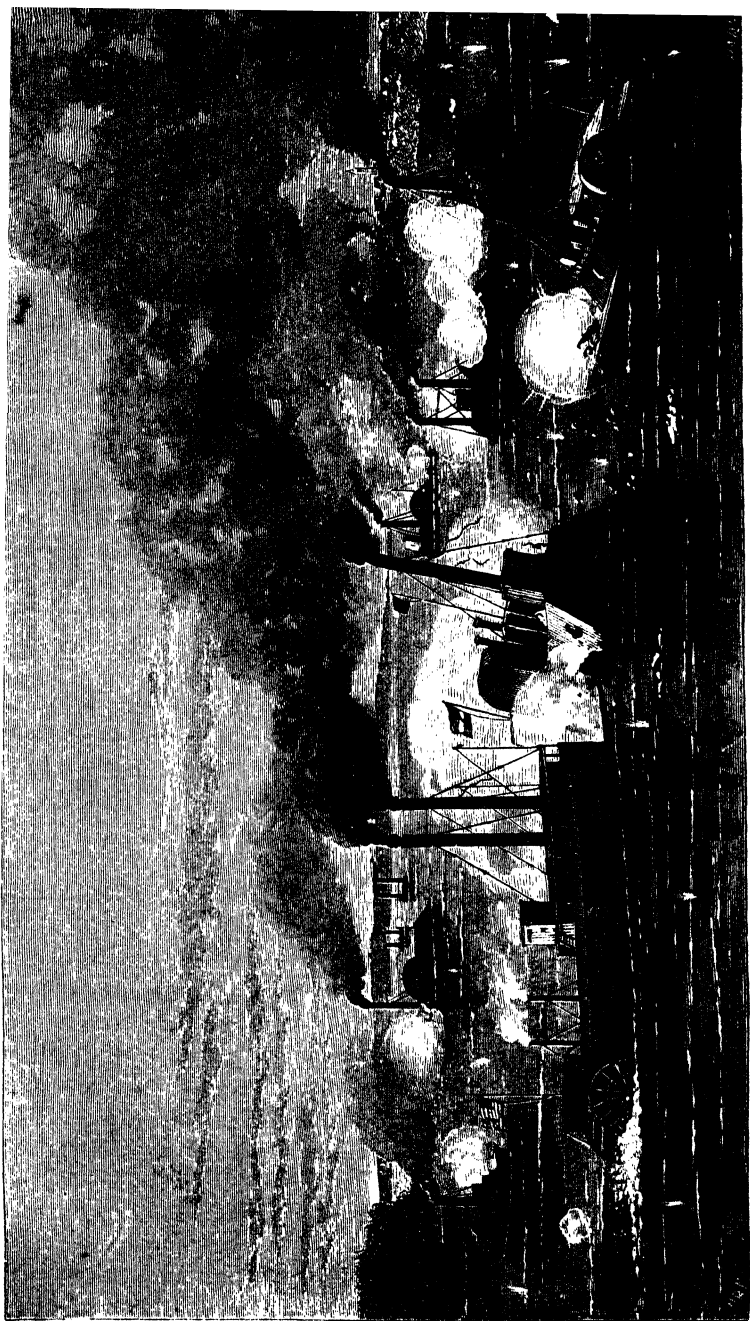
A. H. FOOTE, *Flag-Officer.*

Hon. GIDEON WELLES, *Secretary of the Navy, Washington, D. C.*

Soon after the date of these letters Commodore Foote left the fleet, on account of his wound; and before Commodore Davis had received the formal order appointing him to this important command, he had an opportunity of testing his fitness for the position, and winning the honors of a successful fight. On the morning of the 10th of May the rebel fleet which was lying at Fort Pillow got under way, and came round the point at the bend above the fort about 7 o'clock, evidently prepared for an engagement, and steered directly up the river. Our gunboats were then tied up, four on one side of the river and three on the other, but they were ready for action. Some of the rebel boats were fitted as rams, and they evidently hoped to run our vessels down. The rebel steamers in advance made directly for a mortar-boat, which for a time was unprotected, but the Cincinnati and the Mound City hastened to her rescue, and she was saved. There were eight of the enemy's gunboats iron-clad, and they came on in three divisions. The Cincinnati, Commander Stembel, and the Mound City, Commander Kitly, encountered the eastern division, and were repeatedly struck by the rams, while the fight often went on at pistol-shot distance, and sometimes almost hand to hand, as the vessels struck each other and ground along each other's sides. Our iron-clads seemed more stoutly built than the rebel boats, and therefore succeeded in disabling them and driving them back. The Benton was remarkably strong, having been built originally for a snag-boat; and although she had very little steam-power in proportion to her size, she was able to endure both collisions and shot. She met the two leading vessels of the rebel middle division, and they were soon disabled by her heavy battery. The boilers of one of them were exploded by the Benton's shot; the other was speedily disabled, and they, with the one which the Cincinnati first encountered, went drifting down the stream. In the third division of the rebel line, a gunboat engaged with the Carondelet received a 50-pound shot through her boilers, and she was also disabled. Thus one-half of the enemy's fleet in less than an hour were rendered helpless, and the remainder retreated under the guns of Fort Pillow. The injured boats might easily have been captured, had our gunboats been able to tow them out of action; but, deficient as they were in power proportioned

to weight and size, had they grappled the crippled boats in the swift current, the prizes would have been very likely to drag them under the guns of the forts. But though slow, loaded as they were with their plating and their guns, and with only the engines they had while they were unarmed and unplated, they were much more than a match for the boats of the rebel flotilla. Their armor-plates were thicker, and, in general, their batteries were heavier. The rebels constructed some very formidable iron-clads during the war, but the river boats which they prepared on the Mississippi were too light to meet on equal terms our better constructed iron-clads. Still many of them carried rifled guns, and they had an advantage in speed over our more heavily laden boats.

Some interesting incidents have been related of this fight. The rebel ram Louisiana made the first attack on the Cincinnati, and attempted to run her down. Instead of receiving her blow, the Cincinnati sheered so far that the ram ran along-side, instead of striking. At this moment Lieutenant Stembel shot the pilot of the ram, and was himself instantly struck in the shoulder by a musket-shot, which caused a severe but not dangerous wound. The crews of the two vessels then had a fierce hand-to-hand fight. The ram endeavored to get her head round, so as to strike our gunboat, but the hot-water pipes from the Cincinnati drove the crew from the deck, and the ram withdrew. Very soon after the Cincinnati was attacked by three rebel boats at once, but the St. Louis now came to her aid, and striking one amidships, quite disabled her. Our fleet seems to have been handled with great skill by Admiral Davis, and the battle soon ended in a complete victory, except, as has been said, that our gunboats could not tow up-stream their disabled enemies, and they therefore drifted down.



RATTLE OF MEMPHIS.

CHAPTER XXXVIII.

BATTLE WITH THE REBEL FLEET AT MEMPHIS, AND CAPTURE OF THE CITY.

Soon after the attack on Fort Pillow, and the action with the rebel flotilla at that point, the fortifications there were abandoned, the enemy deeming it more important to concentrate troops in the neighborhood of Corinth than to hold the forts on this portion of the Mississippi.

The rebel fleet retreated to Memphis, and having repaired their damages, its officers held themselves in readiness for another engagement. Memphis is the most important city between New Orleans and St. Louis. It possesses great commercial advantages, from its being the western terminus of a very extensive system of railways. The great trunk line, which runs westward from the Atlantic cities, through Virginia, East Tennessee, and skirting Northern Georgia, Alabama, and Mississippi, reaches the Mississippi at Memphis. With this main line a road from Charleston, and another from Mobile and New Orleans, connect on the south, while on the north the Nashville road unites it with the valley of the Cumberland and the Ohio. After the completion of these roads Memphis very soon became an important commercial centre, and was growing very rapidly at the commencement of the rebellion. So long as the rebels could control the Mississippi, and hold Memphis and the railroads centring there, the cause was safe; for from the great river and its tributaries, and from Texas, and from these long lines of railways, almost unlimited supplies could be drawn, and these supplies and troops could be sent along these channels in every direction. To crush the rebellion it was not only ne-

3
5

cessary to blockade the whole Atlantic coast, but to establish another internal one along the Mississippi and the trunk lines of railway. Memphis was not fortified. It was, as was thought, securely guarded by the strong forts above and by Vicksburg below; and in addition to the works on land, the rebel river fleet was superior in numbers to our own. Memphis, then, was not at first supposed to be in danger. Another reason for not fortifying it was, that an attack either by the gunboats or on the land side would destroy the town. When, therefore, Columbus, Island No. 10, and Fort Pillow had fallen, Memphis was left with no defence, except the rebel flotilla. In the mean time New Orleans had been captured, and the whole rebel navy there, including some of their most formidable iron-clads, had been destroyed, and the gunboat fleet above could not be reënforced. The rebels, however, concentrated their remaining strength before Memphis, and concluded to risk all upon a final battle. They held some advantages, to which they trusted for victory.

On the 5th of June, Flag-officer Davis got under way from Fort Pillow, leaving the iron-clads Pittsburg and Mound City still at the fort for the protection of the place, and to convoy some transports not then ready to leave. On the way down the rebel transport Sovereign was surprised in turning a bend in the river, and was captured. On reaching Island No. 44, the mortar-boats, tow-boats, ordnance, commissary, and other vessels of the fleet tied up for the night, while the gunboats anchored at 8 o'clock p. m. at the lower end of Island No. 45, one mile and a half from the city of Memphis.

At daylight the next morning the rebel fleet, numbering eight vessels, were seen lying at the levee. They dropped down below Railroad Point, and immediately returning, arranged themselves in front of the city. In addition to the gunboats there were four rams, under the command of Colonel Ellet. Colonel Ellet had very earnestly urged upon the Government to try this method of attack, being enthusiastic in his belief of its success. His plan was to select some of the swiftest of the river boats which could be obtained, and strengthen them by heavy fore and aft timbers, and other methods, so that they could endure a shock, and then depend upon the blow which could be given to crush in the sides of his enemy's ship when

going at full speed. He had prepared in this manner the Lancaster, the Switzerland, the Monarch, and the Queen of the West; the work which they performed will appear in the account of the battle.

The gunboats engaged were the flag-ship Benton, Lieutenant Commanding S. L. Phelps; the Louisville, Commander B. M. Dove; the Carondelet, Commander Henry Walke; the Cairo, Commander C. Bryant; and the St. Louis, Commander Wilson McGunegh. These got under way at 4.20 A. M., and dropped down the river. The rebel fleet opened fire while still in front of the town, and it was returned by our gunboats, but in such a manner that the shot might not reach the city.

Before the gunboats could be brought into close action, two of Colonel Ellet's rams, the Monarch and Queen of the West, ran swiftly past, and dashed boldly into the rebel line. The enemy's rams endeavored to back down-stream, and then turn; the Queen struck one of them, and sank her almost immediately. She was then struck by a rebel ram, and herself disabled. The Monarch then struck the ram that had injured the Queen, and sank her at a blow. The gunboats were now pouring in a destructive fire, and at the instant when the Beauregard was hit by the Monarch, a shot passed through her boilers, and she blew up. The General Price was struck by one of their own rams, and, running in shore on the Arkansas side, careened over and sank. The Little Rebel, crippled by our shot, made for the shore, followed by the ram Switzerland, which pushed her on, having too little headway to crush her side. The Rebel was the flag-ship, and Commodore Montgomery and his crew, instead of surrendering, swam and waded ashore, and took refuge in the woods. The shells of our gunboats set the Jeff. Thompson on fire, and she was run on shore by the crew and abandoned; she burned to the water's edge, and blew up. Three of the rebel rams seemed at one time to be locked together, and while in that condition, affording a fine target, they were riddled by shot and shell. The Sumter was captured, though badly cut up, and the General Bragg was also kept afloat, though shattered by our shot. Of the whole rebel fleet, one only, the Van Dorn, escaped, by her superior speed, and went down the river.

It is not often that so many elements of destruction enter into a single combat; and when all were busy in the work of death, they formed a scene whose terribleness at the moment could not be fully known, because of the confusion of the battle, and because it passed so quickly. The crisis of the fight was over in half an hour; and when it is remembered that our own gunboats fired in the action over three hundred rounds of shell and solid shot, and if we add to this the fire of the rebels, the rattle of small-arms, the explosion of boilers pierced by shot, the blowing up of magazines, and the crash of timbers in collisions with the rams, some idea may be formed of the roar and tumult and havoc of the fight.

The thousands of spectators who thronged the high river banks were not long kept in suspense. When the smoke lifted after the brief struggle, and the roar of the guns was over, they saw that the rebel fleet was annihilated, and the city was at the mercy of the Yankees. This battle ended the naval power of the rebels on the Western rivers, and only the forts of Vicksburg remained to obstruct the navigation of the Mississippi; for, previous to this, Farragut had dashed open the gates below New Orleans, an account of which must be deferred until the second volume. Above and below Vicksburg the great river was restored to the control of the Government, and the Cumberland, the Tennessee, and the Ohio floated not a hostile boat.

